

# **Exhibit 1**

12/13/2023

In re Ripple Labs. Inc., Litigation  
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Saifedean Ammous, Ph.D.

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
OAKLAND DIVISION

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In re RIPPLE LABS INC.                    ) Case No. 4:18-cv-  
LITIGATION                                    ) 06753-PJH

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)

This Document Relates to:            )

ALL ACTIONS                                )

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)

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VIDEOTAPED DEPOSITION OF SAIFEDEAN AMMOUS, PhD

LOS ANGELES, CALIFORNIA

WEDNESDAY, DECEMBER 13, 2023

9:08 A.M.

Reported by: Leslie A. Todd, CSR No. 5129 and RPR

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DIGITAL EVIDENCE GROUP

1730 M Street, NW, Suite 812

Washington, D.C. 20036

(202) 232-0646

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1 Deposition of SAIFEDEAN AMMOUS, PhD, held at  
2 the offices of:

3

4

5 KING &amp; SPALDING LLP

6 LOS ANGELES OFFICE

7 633 West 5th Street

8 Suite 1600

9 Los Angeles, California 90071

10

11

12

13

14 Pursuant to notice, before Leslie Anne Todd,  
15 California Certified Shorthand Reporter in and for  
16 the State of California, who officiated in  
17 administering the oath to the witness.

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1 A P P E A R A N C E S

2

3 On Behalf of Lead Plaintiff and Certified Class:

4 OLEG ELKHUNOVICH, ESQUIRE

MICHAEL TAYAG, ESQUIRE

5 SUSMAN GODFREY LLP

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7 (310) 789-3193

8 mtayag@susmangodfrey.com

9 oelkhunovich@susmangodfrey.com

10

11 On Behalf of Defendant Ripple Labs Inc.:

12 BRADLEY OPPENHEIMER, ESQUIRE

13 JUSTIN BERG, ESQUIRE

14 KELLOGG HANSEN TODD FIGEL & FREDERICK

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20

21 ALSO PRESENT:

22 JINAH CHOI, Videographer

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## 1 C O N T E N T S

## 2 EXAMINATION OF SAIFEDEAN AMMOUS, PhD PAGE

3 By Mr. Oppenheimer 9

4

## 5 E X H I B I T S

6 (Attached to transcript)

## 7 AMMOUS DEPOSITION EXHIBITS PAGE

8 No. 175 Twitter posts 23

9 No. 176 Twitter posts 25

10 No. 177 Transcript of interview of Jeff

11 Deist by Saifedean Ammous: Sound

12 Economics in a Confused World 28

13 No. 178 Twitter posts 53

14 No. 179 Twitter posts 54

15 No. 180 URL of podcast interview of

16 Jeff Davidson by Saifedean Ammous 56

17 No. 181 Podcast interview of Jeff Davidson

18 by Saifedean Ammous 56

19 No. 182 XRP Market Structure Working Paper:

20 A Macroeconomic Perspective,

21 beginning Bates No. RPLI\_00499634 130

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## 1 EXHIBITS CONTINUED

2 (Attached to transcript)

3 AMMOUS DEPOSITION EXHIBITS PAGE

4 No. 183 Columbia University Center on

5 Capitalism and Society Working

6 Paper No. 92, August 2016: Can

7 Cryptocurrencies fulfil the

8 functions of money? by

9 Dr. Saifedean Ammous 203

10 No. 184 Insights "On-Demand Liquidity

11 Spans Worldwide," November 2022 206

12 No. 185 Twitter posts 229

13 No. 186 Twitter posts 237

14 No. 187 Twitter posts 241

15 No. 188 Twitter posts 242

16 No. 189 Twitter posts 246

17 No. 190 Twitter posts 249

18 No. 191 Twitter posts 252

19 No. 192 Twitter posts 254

20 No. 193 Book written by Saifedean Ammous:

21 Principles of Economics 258

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## 1 EXHIBITS CONTINUED

2 (Attached to transcript)

3 AMMOUS DEPOSITION EXHIBITS PAGE

4 No. 194 Book written by Saifedean Ammous:

5 The Fiat Standard, The Debt

6 Slavery Alternative to Human

7 Civilization 259

8 No. 195 Article by Joakim Book, March 10,

9 2022: Everything is the Fed's Fault:

10 A Review of the Fiat Standard 265

11 No. 196 Book written by Saifedean Ammous:

12 The Bitcoin Standard 269

13 No. 197 Article by David Gerard, 7th April

14 2018: Saifedean Ammous: The Bitcoin

15 Standard - Making the Austrian School

16 case for Bitcoin 271

17 No. 198 David Gerard's profile from

18 Lawrence University 271

19 No. 199 Twitter posts 273

20 No. 200 Coppola Comment: The Bitcoin

21 Standard - a critical review,

22 April 11, 2018 275

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1 E X H I B I T S C O N T I N U E D

2 (Attached to transcript)

3 AMMOUS DEPOSITION EXHIBITS PAGE

4 No. 201 Twitter posts 279

5 No. 202 Twitter posts 280

6 No. 203 Twitter posts 281

7 No. 204 Twitter posts 284

8 No. 205 Twitter posts 288

9 No. 206 Twitter posts 289

10 No. 207 Twitter posts 292

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1 P R O C E E D I N G S

2 -----

3 THE VIDEOGRAPHER: This is the beginning  
4 of media number 1 in the videotaped deposition of  
5 Dr. Saifedean Ammous taken by counsel for  
6 defendant in the matter of Ripple Labs Inc.  
7 Litigation filed in the United States District  
8 Court, Northern District of California, Oakland  
9 Division, Case No. 4:18-cv-06753-PJH.

10 This deposition is being held at King &  
11 Spalding, located at 633 West Fifth Street, Unit  
12 1600, Los Angeles, California 90071. Today's date  
13 is December 13th, 2023, and the time on the  
14 monitor is 9:09 a.m.

15 My name is Jinah Choi. I am the  
16 videographer, and the court reporter is Leslie  
17 Todd, representing Digital Evidence Group.

18 Counsel will state their appearances for  
19 the record, after which the court reporter will  
20 swear in the witness.

21 MR. ELKHUNOVICH: Oleg Elkhunovich,  
22 Susman Godfrey, on behalf of lead plaintiff and

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1 certified class.

2 MR. TAYAG: Michael Tayag, Susman  
3 Godfrey, class counsel.

4 MR. OPPENHEIMER: Bradley Oppenheimer  
5 from Kellogg Hansen Todd Figel & Frederick for  
6 defendant Ripple Labs Inc. I'm joined by my  
7 colleague Justin Berg from the same firm.

8 SAIFEDEAN AMMOUS, PhD,  
9 and having been first duly sworn,  
10 was examined and testified as follows:

11 EXAMINATION

12 BY MR. OPPENHEIMER:

13 Q Good morning, Dr. Ammous. Could you  
14 please state your name for the record.

15 A Saifedean Ammous.

16 Q And where do you currently live?

17 A Amman in Jordan.

18 Q And where do you ordinarily conduct  
19 business?

20 A Amman, where I live.

21 Q You understand that you're testifying  
22 today under the same oath that you would take if

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1 you were testifying in a courtroom before a jury,  
2 right?

3 A Yes.

4 Q Is there any reason you can't give  
5 truthful and accurate testimony today?

6 A No.

7 Q Have you ever been deposed before?

8 A No.

9 Q Okay. It looks like you brought a  
10 couple of documents with you. Can you tell us  
11 what those are?

12 A This is my report and this is  
13 Professor Allen Ferrell's report.

14 Q Have you made any annotations in  
15 those copies?

16 A No.

17 Q Okay. So let's start with your  
18 report, and we've got a copy that we'll mark as  
19 an exhibit for identification. This will be  
20 Exhibit 174.

21 (Exhibit No. 174 was marked for  
22 identification.)

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1 BY MR. OPPENHEIMER:

2 Q Is Exhibit 174 a copy of the rebuttal  
3 report you submitted in this litigation?

4 A Let me just make sure. (Peruses  
5 document.)

6 Looks like it, yes.

7 Q And this report is dated August 30th,  
8 2023, right?

9 A Yes.

10 Q You haven't submitted any supplements  
11 or amendments since August 30th, 2023, correct?

12 A I have not.

13 Q And you don't currently intend to do  
14 so, correct?

15 A I do not intend to do so.

16 Q Your August 30th report marked as  
17 Exhibit 174 contains all of the expert opinions  
18 you intend to offer in this case, right?

19 A Yes.

20 Q And it contains all the bases for  
21 those opinions, correct?

22 A I mean, I would imagine that that

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1 would be difficult. The basis for that opinion  
2 is my 20-year career in this field, which can't  
3 all be contained in a report, but it includes a  
4 significant -- it includes the reference to all  
5 the material that was consulted directly and  
6 cited.

7 Q And your report contains all of the  
8 reasoning that you've applied to reach your  
9 conclusions in this case?

10 A Yes.

11 Q If you look at Exhibit 174, your  
12 report, there's an Exhibit A within that.

13 A Yes.

14 Q Exhibit A is a copy of your CV,  
15 correct?

16 A Yes.

17 Q And the CV that you submitted with  
18 your report contains all of the credentials you  
19 believe to be relevant to your opinions in this  
20 case; is that right?

21 A Yes.

22 Q Please turn to paragraph 1 of your

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1 report on page 1.

2 A Mm-hmm.

3 Q In paragraph 1, you write: "I have  
4 been asked to offer my expert opinion on and  
5 respond to the expert report of Professor Allen  
6 Ferrell dated July 18, 2023, in this case."

7 Does that accurately describe the  
8 assignment you were given?

9 A Yes.

10 Q And all of the opinions that you're  
11 offering in this case are intended to rebut  
12 opinions that were offered by Professor Ferrell,  
13 correct?

14 A Correct.

15 Q You're not here to offer any opinions  
16 rebutting the expert reports submitted by any of  
17 defendants' other expert witnesses, correct?

18 A Correct.

19 Q Let me ask you to turn to paragraph  
20 14.

21 In paragraph 14 you write: "Based on  
22 my qualifications and work experience, I believe

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1 I am qualified to offer an assessment of the  
2 economics of digital assets."

3 Do you see that?

4 A Yes.

5 Q What do you mean by the "economics of  
6 digital assets" in that paragraph?

7 A It means the study of the economics  
8 of digital assets like Bitcoin, Ripple, Ethereum.

9 Q I don't mean to be tedious, but I  
10 think your answer to what you mean by "the  
11 economics of digital assets" was the study of the  
12 economics of digital assets.

13 Can you define that term, "the  
14 economics of digital assets"?

15 A So economics is the field of study of  
16 human action under the condition of scarcity.  
17 And the -- the applications of this field extend  
18 to all kinds of avenues of human action. And  
19 digital assets are forms of digital property that  
20 are new, and they have economic value and they  
21 are scarce, and they are traded, some of them --  
22 in exchanges, some of them peer to peer, and so

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1       they have economics, and I study these economics.

2               Q       Do you understand Professor Ferrell  
3       to have offered an opinion on the economics of  
4       digital assets in his report?

5               A       I would say yes.

6               Q       Let's turn to paragraph 15, the next  
7       paragraph in your report.

8               A       Mm-hmm.

9               Q       There you write: "I am being  
10      compensated at a rate of \$500 per hour for my  
11      work on this case, including the preparation of  
12      this report. No part of my compensation is  
13      contingent on the substance of my opinions or on  
14      the outcome of this case."

15                      Do you see that?

16              A       Yes.

17              Q       How much time approximately did you  
18      spend writing the report in this case?

19              A       Forty-one hours.

20              Q       And how much time have you spent  
21      working on this case beyond writing the report?

22              A       I'm guessing around another 30 hours.



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1           Q           So if my math is right, you've been  
2   paid or at least billed something around \$35,000;  
3   is that right?

4           A           Mmm, yes, sort of. Well, I haven't  
5   billed the final -- the last month or so, I  
6   haven't billed it yet, so I've billed less than  
7   that.

8           Q           Okay. Did you do anything to prepare  
9   for today's deposition?

10          A           Yes.

11          Q           And what did you do?

12          A           I reread the reports.

13          Q           Anything else?

14          A           That's pretty much it.

15          Q           Did you meet with anyone to prepare  
16   for your deposition today?

17          A           Yes, I met with counsel.

18          Q           Approximately how many times?

19          A           We met in person yesterday, and we  
20   met over videoconferencing over the past couple  
21   of months, I would say -- I don't know exactly  
22   how many off the top of my head, but somewhere

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1 between four and six, I think, times.

2 Q Roughly how many hours total have you  
3 spent meeting with counsel in preparation for  
4 your deposition?

5 A Approximately 12, I'd say.

6 Q Did you do anything else to prepare  
7 for your deposition today?

8 A I flew in from Amman, Jordan. That  
9 was a 24-hour trip. I don't know if that counts  
10 as preparation, but, yeah, that was for this  
11 deposition.

12 Q Anything else?

13 A No, that's it.

14 Q Have you discussed your testimony in  
15 this case with anyone other than counsel?

16 A No.

17 Q Have you discussed your involvement  
18 in this case with anybody other than counsel?

19 A No.

20 Q Let's turn back to your CV, Exhibit A  
21 to Exhibit 174.

22 A Mm-hmm.

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1 Q Is this a -- is this CV complete and  
2 accurate to the best of your knowledge?

3 A Probably, yes.

4 Q So let's start with the Education  
5 section at the beginning.

6 A Mm-hmm.

7 Q Does your -- does the Education  
8 section here reflect a complete and accurate list  
9 of the degrees that you've obtained?

10 A Yes.

11 Q And below that you've got a section  
12 called Experience. Do you see that?

13 A Yes.

14 Q Does the Experience section reflect a  
15 complete and accurate list of the work experience  
16 that you've had since 2001?

17 A Yes.

18 Q Below that is a section called  
19 Publications.

20 A Mm-hmm.

21 Q Does the Publications section contain  
22 a complete and accurate list of books and

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1 articles that you have published?

2 A Yes.

3 Q Now, let's turn back to the Education  
4 section just for a minute.

5 A Mm-hmm.

6 Q Starting at the bottom of this  
7 section, you list a Bachelor of Engineering in  
8 mechanical engineering from American University  
9 in Beirut earned in 2003, right?

10 A Yes.

11 Q And that was followed by an MSc in  
12 development management in 2004, correct?

13 A Mm-hmm.

14 Q What is development management?

15 A It refers to management in the  
16 context of development projects, economic  
17 development.

18 Q And by "economic development," is  
19 that referring to developing public areas,  
20 private buildings, other things?

21 A In this context it specifically  
22 refers to developing countries. So projects in

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1 the context of poor countries transforming to  
2 more developed, more advanced, industrialized  
3 economies.

4 Q And an MSc, is that a master's  
5 degree?

6 A Yes.

7 Q Now, next up on the list, 2006, MA in  
8 sustainable development. In 2007, MPhil in  
9 sustainable development.

10 A Mm-hmm.

11 Q Those are also master's degrees,  
12 right?

13 A Yes.

14 Q And what is sustainable development?

15 A It's a field of study of economic  
16 development within the context of sustainability  
17 and environmental concerns.

18 Q And were those master's degrees  
19 earned in the course of you working on your PhD?

20 A Yes.

21 Q So let's talk about your PhD then.

22 You received a PhD in sustainable development in

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1 2011, right?

2 A Yes.

3 Q And your dissertation was on  
4 alternative energy science and policy, correct?

5 A Correct.

6 Q You're not claiming that your PhD  
7 dissertation topic is relevant to the opinions  
8 that you're offering here, are you?

9 MR. ELKHUNOVICH: Objection. Form.

10 BY MR. OPPENHEIMER:

11 Q You can answer.

12 A I think it is relevant in that it all  
13 depends on -- it is economics, and it's the  
14 application of the tools of economics.

15 Q How does your opinion in this case  
16 relate to biofuels?

17 A Both are economic topics, and so  
18 understanding economics allows me to develop  
19 mental tools for analyzing both.

20 Q So you're saying that because your  
21 PhD dissertation involved economic tools that  
22 that is its relevance to your report here; is

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1 that right?

2 A No, I'm saying that any -- I'm saying  
3 that studying economics at a graduate level and  
4 obtaining a PhD degree allows you to understand  
5 economic questions with a certain level of  
6 command.

7 Q Dr. Ammous, isn't it true that you've  
8 previously called your PhD mostly unreadable  
9 academic nonsense?

10 A I may have said that online, yeah,  
11 probably.

12 Q Well, not just "may have." In fact,  
13 you did say that online; isn't that right?

14 A Yeah.

15 Q And you've also said that you learned  
16 more about economics from a website called  
17 Mises.org than you did when obtaining any of your  
18 university degrees, right?

19 A Yes.

20 Q Mises.org is the website for the  
21 Mises Institute; is that right?

22 A Yes.

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1           Q           And is it true that Mises -- the  
2   Mises Institute website taught you more than your  
3   PhD did about economics?

4           A           I would say so, yeah.

5           Q           You've also said that you've learned  
6   more from Twitter than you did from any school or  
7   university; is that right?

8           A           That is probably accurate, yes.

9           Q           Well, let's see if we can do better  
10   than "probably."

11                    I'm going to show you a document that  
12   we will mark as Exhibit 175.

13                    (Exhibit No. 175 was marked for  
14   identification.)

15   BY MR. OPPENHEIMER:

16           Q           Exhibit 175 is a post on Twitter from  
17   the account @Saifedean. Is that your account?

18           A           Yes.

19           Q           And it has a blue checkmark. Does  
20   that indicate that this is a verified account?

21           A           Yes.

22           Q           How long have you had a verified



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1 Twitter account?

2 A I don't remember exactly. I think  
3 it's been around a year.

4 Q Why did you decide to get a verified  
5 account?

6 A Because there are a lot of  
7 impersonator accounts that impersonate me and  
8 contact people.

9 Q So the verified account allows people  
10 to know that the tweets from this account are  
11 really yours and not an impersonator?

12 A Yes, in theory. Although,  
13 unfortunately, many of the impersonator accounts  
14 can get the verified checkmark as well, so it's  
15 not exactly foolproof.

16 Q But this account shown in  
17 Exhibit 175, @Saifedean, that's the account that  
18 you control, right?

19 A Yes.

20 Q And what you wrote here was, in the  
21 bottom tweet on this page dated January 4th,  
22 2019, at 8:50 a.m., quote: No, I use Twitter

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1 primarily for my education, and in 10 years it's  
2 taught me more than any school or university and  
3 completely changed my life. Is that right?

4 A Yes.

5 Q Do you believe that Twitter has  
6 taught you more than your PhD program at  
7 Columbia?

8 A I would say so.

9 Q And it's also true that you said  
10 Bitcoin podcasts provide a more sound economic  
11 education than universities do, correct?

12 A I don't remember the exact context in  
13 which I said this, and if I -- if I did say it in  
14 those terms, but I will -- I do remember sharing  
15 that sentiment at certain points, not necessarily  
16 in the same exact words you mentioned.

17 Q All right. Well, let's -- let's see  
18 if we can get the exact words then.

19 We'll mark this document Exhibit 176.

20 (Exhibit No. 176 was marked for  
21 identification.)

22 BY MR. OPPENHEIMER:

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1 Q And if you look on Exhibit 176, the  
2 third tweet down on the page, it's dated  
3 August 9th, 2023, at 8:04 p.m.

4 Do you see that?

5 A Mm-hmm.

6 Q What you write there is: "Bitcoin  
7 podcasts have definitely done more sound economic  
8 education in a year than fiat universities manage  
9 in a century."

10 Do you see that?

11 A Yes.

12 Q Is that your view sitting here today  
13 that Bitcoin podcasts do more sound economic  
14 education than fiat universities do?

15 A I think I would have to agree with  
16 that, yeah.

17 Q This tweet is dated about three weeks  
18 before you submitted your rebuttal report in this  
19 case. Had you already been engaged as an expert  
20 in this litigation by that time?

21 A I don't remember exactly when the  
22 term of engagement started, but I think -- I'm

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1 pretty sure I was by August 9th. I don't  
2 think -- yeah, and this was definitely longer  
3 than a three-week engagement.

4 Q Do you have an approximate date of  
5 when before your report you were engaged?

6 A Not off the top of my head,  
7 unfortunately.

8 Q Do you know if it was before or after  
9 Professor Ferrell submitted his report?

10 A I do not remember, no.

11 Q Okay. And I apologize, I don't  
12 remember if we covered this earlier, so I'll just  
13 ask it now.

14 Have you ever been engaged as an  
15 expert witness in any other case?

16 A No.

17 Q Okay. Turning back to your PhD in  
18 sustainable development, isn't it true that you  
19 believe the economics you learned in your PhD  
20 program made no sense?

21 A A lot of it, yeah.

22 Q Well, not just "a lot of it," all of

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1 it.

2 Isn't it true that you think none of  
3 what you learned in your PhD program made any  
4 sense?

5 A No, I think "none" is a big word. I  
6 wouldn't say "none," but I think a lot of it did  
7 not make sense.

8 Q Well, you said "none" in the past  
9 when describing this, haven't you?

10 A I may have.

11 Q Let's get another exhibit. We will  
12 mark this as 177.

13 (Exhibit No. 177 was marked for  
14 identification.)

15 BY MR. OPPENHEIMER:

16 Q Exhibit 177 is a transcript of an  
17 interview that you did with Jeff Deist,  
18 D-E-I-S-T, at the Mises Institute in February of  
19 2020, correct -- I'm sorry, February of 2022,  
20 correct?

21 A Yes.

22 Q And if you look on the first page of

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1 Exhibit 177, the bottom paragraph --

2 A Yes.

3 Q -- what you state there in this  
4 transcript is: "I was a PhD student at Columbia  
5 University learning regular mainstream economics,  
6 none of which made any sense."

7 A Mm-hmm.

8 Q Do you see that?

9 A Mm-hmm.

10 Q Was that statement accurate when you  
11 made it in February of 2022?

12 A Well, I would say here, if you read  
13 the sentence, it says, "... learning regular  
14 mainstream economics, none of which made any  
15 sense."

16 Your earlier question asked me if  
17 everything I learned at Columbia didn't make  
18 sense, but I did learn things other than what I  
19 would term regular mainstream economics. So for  
20 instance, the statistics that I learned at  
21 Columbia I believe was very useful.

22 Q So let's -- let's make sure we've

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1 really clarified this then.

2                   You agree that the regular mainstream  
3 economics you learned during your PhD program did  
4 not make any sense, right?

5           A           And by that, yeah, I refer to the --  
6 what I would call the neoclassical approach to  
7 economics and macroeconomic theory in particular.

8           Q           And you weren't taught any Austrian  
9 theory economics during your PhD program, were  
10 you?

11          A           No, I wasn't taught it, but I did  
12 learn it on my own.

13          Q           Right, and we'll come back to that.

14                   Was there any other form of economics  
15 other than the neoclassical approach that you  
16 were taught during your PhD program?

17          A           We were taught a lot of econometrics  
18 and statistical analysis, which is neither  
19 Austrian nor neoclassical. It's completely  
20 separate.

21          Q           And how much of the econometrics that  
22 you were taught made sense?

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1 A A lot of it. It was very useful.

2 Q Were there any other fields that you  
3 studied in your PhD program?

4 A Yes. I mean, it was a  
5 multidisciplinary program where we took a variety  
6 of topics. So I took courses in climate, I took  
7 courses in science policy, I took courses in  
8 energy, and I took -- and a lot of statistics.

9 Q Anything else?

10 A And then, you know, the economics  
11 courses as well.

12 Q Right. Do you consider yourself an  
13 econometrician?

14 A I would not call myself an  
15 econometrician as a first job, but it's something  
16 that I've studied extensively.

17 Q Professor Ferrell's econometric  
18 analysis here, or at least part of it, involves a  
19 factor model, correct?

20 A Mm-hmm.

21 Q You've never published any papers  
22 employing a factor model, have you?



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1 A I have not.

2 Q His report also discusses the concept  
3 known as an event study. Right?

4 A Yes.

5 Q You've never published any papers  
6 employing an event study, have you?

7 A I have not.

8 Q You don't have any degrees in  
9 finance, correct?

10 A I do not.

11 Q You don't have any degrees in  
12 psychology?

13 A I do not.

14 Q One other concept that Professor  
15 Ferrell discusses in his report is market  
16 efficiency. You've never published any papers on  
17 how to measure market efficiency, have you?

18 A No, I have not.

19 Q Now, we mentioned Austrian School  
20 economics briefly earlier, and I'd like to dive  
21 into that a little more. I think you testified  
22 that you taught yourself Austrian School

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1 economics; is that right?

2 A Yes. I mean, online.

3 Q It's fair to say that Austrian  
4 economics is outside the academic mainstream,  
5 correct?

6 A Correct.

7 Q And it's fair to say that you reject  
8 views of mainstream academic economics, right?

9 A I mean, it depends on views.  
10 Obviously, there are some things that I accept  
11 and that I wouldn't disagree with, but there are  
12 some, of course, that I do disagree with. And I  
13 would say it isn't really like it is a cut and  
14 dry issue of who's in the mainstream and who  
15 isn't. It's a lot more shades of gray rather  
16 than white and black.

17 So a lot of -- some Austrian  
18 economists would be considered in the mainstream.  
19 So Friedrich Hayek, for instance, he won the  
20 Nobel Prize in economics, and he is an Austrian.

21 Q Right. So fair to say there are in  
22 some sense two major sub-schools of Austrian

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1 thought, one associated with Friedrich Hayek and  
2 one associated with von Mises?

3 A It's difficult to say that. I  
4 wouldn't entirely agree, because there is an  
5 enormous amount of overlap and agreement between  
6 them. And they -- it's -- trying to split it  
7 into different schools makes it sound a little  
8 more separate than it really is. I'd say there's  
9 a lot more homogeneity than to say -- I mean it's  
10 debatable, a subjective thing.

11 Q Well, your view is that Austrian  
12 economists are vilified and excluded from  
13 mainstream academia, correct?

14 A There is a degree of that, yes.

15 Q And it's also your view that  
16 mainstream economics is a load of rubbish, right?

17 A Yes.

18 Q Now, is it fair to say in general  
19 terms Austrian School economists don't use an  
20 empirical approach based on mathematical  
21 modeling, that they -- well, let me stop the  
22 question there. So I'll withdraw it and give you

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1 a clean one.

2 Is it fair to say in general terms  
3 that Austrian School economics don't use an  
4 empirical approach based on mathematical  
5 modeling?

6 A No, I think this is -- it's -- the  
7 issue is not that they don't use it. This is a  
8 common misconception, I think. The issue is that  
9 Austrians believe that empirical analysis has to  
10 be grounded in theory. And so without theory,  
11 data is -- data is mute. Data can't tell you  
12 anything.

13 Q And one concept associated with the  
14 Austrian School of economics is praxiology,  
15 right?

16 A Yes.

17 Q The notion of praxiology is, in  
18 general terms, making logical deductions from  
19 basic human truths. Is that fair?

20 A Yeah, specifically the study of human  
21 action.

22 Q And so in Austrian praxiological

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1 analysis, you start with axioms about universal  
2 truths of human action and reason from that. Is  
3 that right?

4 A Yeah.

5 Q Now -- isn't it true that you've said  
6 your PhD is worthless?

7 A I don't remember the exact time and  
8 place if I said that. I don't know. I may have.

9 Q Isn't it true that you've said PhDs  
10 are a dime a dozen a day -- sorry, a dime a dozen  
11 today?

12 A I have probably said that, yes.

13 Q And isn't it true that you said to  
14 get a PhD, you just need to repeat the propaganda  
15 of the government funding you?

16 A I think I probably said that, yes.

17 Q And you've called university degrees  
18 stupid pointless signals, right?

19 A Probably, yes.

20 Q And you called your own university  
21 education a stupid waste of your youth, right?

22 A I think I have, yes.

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1 Q Let's turn back to the CV attached to  
2 your report, Exhibit 174.

3 Now, from 2003 until 2011, you were a  
4 graduate student, right?

5 A No. 2004.

6 Q What did you do between the time you  
7 got your bachelor's degree in 2003 and the time  
8 you started grad school in 2004?

9 A Well, I started my PhD grad school,  
10 so I -- I guess you could say yes, because in  
11 2003 I started the master's degree in the London  
12 School of Economics, yeah.

13 Q Okay. So you were in that graduate  
14 program 2003 and 2004, and then at Columbia 2004  
15 to 2011; is that right?

16 A Yes.

17 Q Now, after you graduated from your  
18 PhD program, you joined the Columbia University  
19 Center on Capitalism and Society, right?

20 A Yes.

21 Q What were your responsibilities in  
22 that role, if any?

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1           A           So this was -- I should say I started  
2     working with them a little bit earlier as well in  
3     2000 and -- I think it was in 2007. No, 2011.

4           Q           If you --

5           A           Actually, it's not listed here, but I  
6     think in 2011, I joined the center. But in any  
7     case, I was a member -- a foreign member of the  
8     center, which included being part of the center's  
9     events, the center's publications, and working on  
10    task forces on grants and conferences and so on.

11          Q           Did you get paid for your work in  
12    that role?

13          A           Well, the role itself didn't entail  
14    compensation, but it allowed me to get into -- to  
15    get -- so we worked on the research, the Smith  
16    Richardson Foundation grant, so I was part of  
17    that. So it wasn't the role itself that offered  
18    me compensation, but some part of the works there  
19    was involved -- involved compensation.

20          Q           The research that you did in  
21    connection with your role at the Columbia  
22    University Center on Capitalism and Society

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1 concerned the Arab Spring, right?

2 A Some of it, yes.

3 Q Was there other research that you did  
4 in that role?

5 A Yes. I worked with -- with three  
6 other economists in the center, Edmund Phelps and  
7 Gylfi Zoega and Raicho Bojilov, on economic  
8 research on the topic of economic dynamism under  
9 a grant from the Smith Richardson Foundation.

10 Q Now, you never published any peer-  
11 reviewed articles on the Arab Spring research  
12 that you were doing, have you?

13 A What I did publish was an article  
14 called "Arab Corporatism in Corruption and  
15 Economic Development," selected papers from the  
16 Economic Research Forum, 18th Annual Conference.

17 Q And that was published in 2012,  
18 right?

19 A Yes.

20 Q Which was the same year that you  
21 joined the Center on Capitalism and Society,  
22 correct?



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1           A           Well, it's -- this is the first year  
2   that I joined it as a foreign member, but I was  
3   also there in 2011. But I guess I just didn't  
4   include it in this version of the CV.

5           Q           Do you know why you didn't include it  
6   on this CV?

7           A           No, I think it was because I was just  
8   trying to make the CV concise. Because I was  
9   there as a visiting scholar in 2016 and I was  
10   there in 2011, so I didn't mention 2011 because  
11   it's already in 2016, and I didn't want to repeat  
12   the same thing. I think it's just -- that's it.

13          Q           Are you still associated with the  
14   Center on Capitalism and Society today?

15          A           No, the Center on Capitalism and  
16   Society has shuttered its door recently.

17          Q           When did that happen?

18          A           I don't know exactly -- I don't  
19   remember exactly, but it was within the last  
20   year, I think.

21          Q           Do you know if it was within the last  
22   three months?

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1           A           I don't know for sure.

2           Q           Okay. So your CV here lists the  
3    dates of your affiliation with the Center on  
4    Capitalism and Society as 2012 to present.

5           A           Mm-hmm.

6           Q           And it's your testimony, though, that  
7    the affiliation no longer goes to the present  
8    because that center has shut down, correct?

9           A           Yeah, although -- yeah, I would have  
10   forgotten to update this. Although, no, I think  
11   it may be the case that when I submitted my CV  
12   for this court case, I think the center was still  
13   going on. I don't remember to be honest. I  
14   don't remember when the date of the shuttering of  
15   the center was, and I clearly didn't update my  
16   CV.

17          Q           Why did you stay affiliated with the  
18   Columbia University Center on Capitalism and  
19   Society given your thoughts about how  
20   universities are a waste of time and talent?

21          A           Well, I think the center has always  
22   been a place where I thought I could find

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1 intellectual stimulation and the ability to think  
2 outside of dominant convention.

3 Q So universities are a waste of time  
4 and talent, except not at the Center on  
5 Capitalism and Society at Columbia?

6 MR. ELKHUNOVICH: Objection. Form.

7 THE WITNESS: I did not say that.

8 BY MR. OPPENHEIMER:

9 Q Your CV says that in 2009 you were an  
10 instructor at Columbia University. That was  
11 while you were a PhD student, correct?

12 A Yes.

13 Q An instructor is not a professor,  
14 right?

15 A Mm-hmm.

16 Q It's a student teaching position?

17 A Well, in that case it wasn't really a  
18 student teacher position. It was a teaching  
19 position.

20 Q Well, a teaching position you held as  
21 a student, right?

22 A I would say it would be more accurate

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1 to say that it was held on top of being a  
2 student, so it was separate from me being a  
3 student because you couldn't teach as a student  
4 like this.

5 Q An instructor is not a tenure-track  
6 position at Columbia, is it?

7 A No.

8 Q Later on in your CV you describe the  
9 role of lecturer at the Columbia University  
10 Middle East research center. Do you see that?

11 A Yes.

12 Q A lecturer also is not a tenure-track  
13 position, is it?

14 A No, it is not.

15 Q Now, when you were at the Columbia  
16 University Middle East research center, you  
17 weren't teaching university students, were you?

18 A No.

19 Q You were teaching Jordanian civil  
20 servants, correct?

21 A Yes.

22 Q At some point, Dr. Ammous, did you

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1 start a company called Thabit Economics?

2 A Yes.

3 Q What was Thabit Economics?

4 A It was an embryonic idea for a  
5 business that went nowhere.

6 Q What was the nature of that business  
7 or the idea that you had for it?

8 A The basic business idea was that it  
9 would be a service that would offer people to use  
10 a digital currency that was backed by physical  
11 gold stored in safe locations in Switzerland.

12 Q And Thabit Economics itself was a  
13 Swiss company, right?

14 A Yes.

15 Q When did you shut it down?

16 A Mmm, I'm not entirely certain. It  
17 was 2013 or 2014, but most likely 2013.

18 Q Why did you leave that off of your  
19 resume?

20 A Because it went nowhere.

21 Q Moving upwards on your CV here, the  
22 next item in your experience is listed as 2016 to

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1 2019, co-founder and research fellow with the  
2 Lebanese Institute for Market Studies.

3 Do you see that?

4 A Yes.

5 Q Was that your primary employment from  
6 2016 to 2019?

7 A No.

8 Q What was your primary employment from  
9 2016 to 2019?

10 A I was an assistant professor of  
11 economics in the Lebanese American University.

12 Q Well, if you look a few lines up on  
13 your CV, there is an entry for Lebanese American  
14 University. It's the second one --

15 A Yes.

16 Q -- under Experience. Do you see  
17 that?

18 A Yes. There is some typo there I just  
19 realized now.

20 Q Okay. So just to make the record  
21 clear, assistant professor of economics is listed  
22 as 2018 to 2019. You're saying those dates are

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1 wrong?

2 A Yes. It should have been 2011  
3 instead of 2018. So I was a lecturer in  
4 economics from 2009 to 2011, I was assistant  
5 professor of economics from 2011 to 2019, and I  
6 was an associate professor of economics from  
7 2000 and -- no, sorry. Actually, wait a second.

8 I was assistant professor of  
9 economics from 2011 to 2018, and then I was  
10 associate professor of economics from 2018 until  
11 2019.

12 Q And were those tenure-track positions  
13 at Lebanese American University?

14 A Yes.

15 Q Did you get tenure?

16 A No.

17 Q When did you find out you weren't  
18 getting tenure?

19 A In 2018.

20 Q So you found out in 2018 that you  
21 weren't going to get tenure there. In 2019 you  
22 left Lebanese American University, right?

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1 A No, I left -- yes, 2019, yes.

2 Q Why did you leave?

3 A I left because I decided that it was  
4 better for me to work on being an -- to work as  
5 an independent author and educator.

6 Q Was that related to the fact that you  
7 weren't going to get tenure there?

8 A Not much. I don't think it would  
9 have made a difference. Even if I got tenure, I  
10 would have left.

11 Q And you've been self-employed since  
12 2019, correct?

13 A Yes.

14 Q Is it fair to say that today you make  
15 your living primarily through selling online  
16 courses and books?

17 A Not online books. I make my living  
18 from selling online courses. Well, I would say  
19 from selling books and online courses.

20 Q Thanks for the clarification.

21 Approximately how much do you make  
22 each year from your online courses? We'll take



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1 books separately.

2 A From my courses, I would say -- I  
3 don't have the numbers, to be honest, so I don't  
4 really have accurate numbers on it. And I -- I  
5 don't remember at this point. I haven't run the  
6 numbers on what my income is from courses.

7 Q How about from your books?

8 A I also don't have accurate estimates  
9 for the last year, and the numbers vary  
10 drastically. So book sales are highly variable.

11 Q Well, let me ask it this way:  
12 Earlier I think we established you've incurred  
13 something like \$35,000 in fees for your expert  
14 work in this case. Whether that's been billed or  
15 not to this point, you've worked the hours for  
16 that.

17 Do you have an approximate estimate  
18 of what percentage of your income that would be  
19 for the year?

20 A I would say it's less than 10 percent  
21 of my income.

22 Q Approximately how many subscribers

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1 does your website have?

2 A I don't know.

3 Q Is it more than a thousand?

4 A I think so, but I'm not sure.

5 Q More than 10,000?

6 A I don't think so, no.

7 Q When did you first start selling  
8 online courses?

9 A In 2019 -- well, 2019 or 2020. I'm  
10 almost certain it's 2019.

11 Q And you've done that through the  
12 website Saifedean.com; is that right?

13 A Yes.

14 Q You own and operate that website,  
15 correct?

16 A Yes.

17 Q Now, on your website you offer  
18 subscribers an option to become Saifedean.com  
19 affiliates, right?

20 A Yes.

21 Q What does it mean to be a  
22 Saifedean.com affiliate?

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1           A           It means you tell people about the  
2   course, you get them to sign up and they get a  
3   discount, and you get a referral fee.

4           Q           Saifedean.com affiliates get a  
5   percentage of the subscription fees that people  
6   they refer pay to the website, right?

7           A           Yes.

8           Q           Approximately how many affiliates are  
9   there today?

10          A           I don't know.

11          Q           When did you first launch the  
12   program?

13          A           August or September of this year.

14          Q           You also offer courses online at  
15   Saylor Academy, right?

16          A           Yes.

17          Q           Have you ever had any financial  
18   relationship with Saylor Academy or any of its  
19   affiliates?

20          A           Yes.

21          Q           Can you describe the financial  
22   relationship you've had?

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1           A           They pay me to host my courses on  
2   their website.

3           Q           Approximately how much do they pay  
4   you for that?

5           A           I'm not sure if I'm supposed to be  
6   saying it. I don't know if there was a  
7   confidentiality agreement. I don't remember at  
8   this point.

9           Q           Sitting here today, are you aware of  
10   any confidentiality agreement between you and  
11   Saylor Academy?

12          A           I am not aware of any, no.

13          Q           So approximately how much do they pay  
14   you for hosting your courses on their website?

15                   MR. ELKHUNOVICH: Counsel, I'm going  
16   to object. I sort of gave you leeway on these  
17   questions, but I think you already asked and got  
18   an answer to the only one that mattered, which is  
19   how his compensation compares in this case to  
20   everything else. So it seems like getting into  
21   the details of his compensation for a variety of  
22   his activities is just designed to be intrusive

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1 into his private life as opposed to his expert  
2 life. So I suggest we move on.

3 MR. OPPENHEIMER: I disagree, and I  
4 don't think the federal system is the place for a  
5 long speaking objection like that.

6 Are you instructing him not to answer?

7 MR. ELKHUNOVICH: I'm not instructing  
8 anything. I'm suggesting we should move on to  
9 other topics.

10 MR. OPPENHEIMER: Okay. Well, the  
11 question stands.

12 MR. ELKHUNOVICH: Okay. And my  
13 objection stands as well.

14 THE WITNESS: They pay \$20,000 I think  
15 per course.

16 BY MR. OPPENHEIMER:

17 Q Per course?

18 A Yeah.

19 Q And how many courses do you have on  
20 the Saylor Academy website?

21 A There are two live, and there's a  
22 third that should go live very soon.

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1 Q Have you ever been paid to promote  
2 Saylor Academy?

3 A No, not to promote it.

4 Q Okay. You've told your online  
5 followers that Saylor Academy offers a fully  
6 accredited university degree, haven't you?

7 A Mmm, I don't remember if that was the  
8 exact phrasing that I used.

9 Q Okay. We're going to mark this  
10 exhibit as 178.

11 (Exhibit No. 178 was marked for  
12 identification.)

13 BY MR. OPPENHEIMER:

14 Q Exhibit 178 is a Twitter thread, the  
15 bottom tweet here is dated June 23rd, 2023,  
16 1:51 a.m.

17 A Mm-hmm.

18 Q In that tweet you wrote: "Some of  
19 them are offered on Saylor.org where you can get  
20 a fully accredited university degree."

21 You see that?

22 A Yes.

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1 Q I'm going to mark another exhibit.

2 This will be Exhibit 179.

3 (Exhibit No. 179 was marked for  
4 identification.)

5 BY MR. OPPENHEIMER:

6 Q Exhibit 179 is another Twitter  
7 thread. If you look at the second one on the  
8 page, it's dated October 5th, 2021, 2:01 p.m.

9 A Mm-hmm.

10 Q What you wrote there in the third  
11 line was: "Go to Saylor.org and take courses and  
12 get full degrees for free."

13 Do you see that?

14 A Mm-hmm.

15 Q You also wrote in your report in this  
16 case at paragraph 10 of Exhibit 174 that  
17 Saylor.org is, quote, a degree granting online  
18 university.

19 Do you see that?

20 A Mm-hmm.

21 Q Dr. Ammous, it's not true to say that  
22 Saylor Academy grants degrees, is it?

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1           A           I think it is. That's what -- I  
2    think I heard it from a discussion with their --  
3    I forget his exact title. His name is -- I  
4    forget his exact name and his exact title, but he  
5    is I think the executive director of Saylor  
6    Academy, and he came on my podcast and he  
7    explained that you can take their courses, pay  
8    for somebody to proctor the exams, and get a  
9    degree.

10          Q           Well, in fact, what he told you is  
11   that they can't say that you get degrees from  
12   Saylor Academy; isn't that right?

13          A           I don't remember that.

14          Q           All right. So we're going to  
15   introduce a video clip. I believe this is the  
16   podcast interview you were just discussing.

17                   MR. OPPENHEIMER: For the record, we  
18   will mark as Exhibit 180 just a page that has the  
19   URL of the video that we're going to play, and  
20   then we'll play part of the video on the screen.

21                   So Exhibit 180 is the URL. We will  
22   mark the electronic video file as Exhibit 181.



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1 (Exhibit Nos. 180 and 181 were  
2 marked for identification.)

3 MR. ELKHUNOVICH: Well, do we have an  
4 electronic video file?

5 MR. OPPENHEIMER: Our -- our hot  
6 seater has it. I --

7 (Video played:)

8 "DR. AMMOUS: So, you guys, you offer  
9 a full" --

10 MR. ELKHUNOVICH: Well, hold on.  
11 Let's turn it off.

12 MR. OPPENHEIMER: Can our hot seater  
13 wait just a second?

14 MR. ELKHUNOVICH: I mean, how are we  
15 handling this? You didn't produce this. This  
16 is -- as far as I'm concerned, this doesn't exist.  
17 So you're marking something that I don't have.

18 MR. OPPENHEIMER: Yeah, Oleg, you have  
19 the link to it. You can type in this link on your  
20 computer and get the same thing we're exactly  
21 about to play. It's publicly available --

22 MR. ELKHUNOVICH: Okay. So I object

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1 --

2 MR. OPPENHEIMER: Hang on. It's  
3 publicly available, so there's no production  
4 obligation here.

5 MR. ELKHUNOVICH: I object to marking  
6 Exhibit 181 (sic) and Exhibit 181, which does not  
7 exist. I haven't seen it. I do not have it.

8 I do not object to you playing the  
9 video that you want to play -- which I understand  
10 you're representing is a YouTube video with a link  
11 on Exhibit 180; is that right?

12 MR. OPPENHEIMER: That's right.

13 MR. ELKHUNOVICH: Okay.

14 MR. OPPENHEIMER: Okay. It's noted.

15 So if our hot seater can pull up this  
16 clip, what I'm going to show you is on the YouTube  
17 link reflected in Exhibit 180, we're going to play  
18 that video from time stamps 5 minutes, 38 seconds,  
19 to 6 minutes, 4 seconds.

20 (Video clip played:)

21 "DR. AMMOUS: Yeah, and so you guys,  
22 you offer a full university degree for free?

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1 "JEFF DAVIDSON: Well, certificates.  
2 And right now we don't -- we don't -- we don't  
3 have the degree right now. So we are in the  
4 process of getting permission for the degree. For  
5 a business degree, we have all the (inaudible) up  
6 there, all the courses you would need. And so in  
7 America the word 'degree' is highly regulated, so  
8 we can't use the word 'degree' yet."

9 (End of video clip.)

10 BY MR. OPPENHEIMER:

11 Q That was a clip from your podcast  
12 episode with Jeff Davidson, right?

13 A Yes.

14 Q And Jeff Davidson is the CEO of  
15 Saylor.org; is that right?

16 A I'm not sure, but I think so.

17 Q And he told you, "We can't use the  
18 word 'degree' yet" when he was on your show,  
19 right?

20 A It seems like it, yes.

21 Q Why did you say that Saylor  
22 University grants degrees in your report and in

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1 Exhibits 178 and 179?

2 A Mmm. I'm not sure. I think I -- it  
3 must have slipped my attention when he was  
4 speaking, but I'm -- I'm clearly mistaken if this  
5 is the case.

6 MR. OPPENHEIMER: Okay. We've been  
7 going about an hour. If you would like to take a  
8 break, I'm happy to. If you would rather keep  
9 going, it's up to you.

10 MR. ELKHUNOVICH: Let's take a little  
11 break.

12 MR. OPPENHEIMER: Okay.

13 THE VIDEOGRAPHER: We're off the  
14 record at 10:09 a.m.

15 (Recess.)

16 THE VIDEOGRAPHER: This marks the  
17 beginning of media number 2. We're on the record  
18 at 10:20 a.m.

19 BY MR. OPPENHEIMER:

20 Q Dr. Ammous, can I ask you to please  
21 open your expert rebuttal report, Exhibit 174, to  
22 paragraph 11.

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1           A           Mm-hmm.

2           Q           What you wrote in paragraph 11 was:

3       "I have worked as a consultant and advisor to  
4       several companies in the digital asset space,  
5       including NYDIG, Upstream Data Inc., and  
6       Coinbits."

7                       You see that?

8           A           Yes.

9           Q           Have you worked as a consultant and  
10       advisor to any companies other than the ones  
11       listed in this paragraph?

12                      Let me withdraw that question and  
13       give it a little better.

14                      Have you worked as a consultant and  
15       advisor for any other digital asset companies  
16       other than the ones listed in paragraph 11?

17          A           Yes.

18          Q           What other companies?

19          A           Off the top of my head now, there's  
20       Block App. And for a very brief period, I was --  
21       worked with a company called GiveBitcoin. Those  
22       are the only two that I remember at this point.

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1 Q Okay. So let's start with the ones  
2 you've listed here. The first one is NYDIG.  
3 What is NYDIG?

4 A NYDIG is a financial -- digital asset  
5 financial services company headquartered in New  
6 York.

7 Q And what is your relationship with  
8 NYDIG?

9 A I am an advisor to the company.

10 Q Is that role ongoing as of today?

11 A Yes.

12 Q When did you start as an advisor to  
13 NYDIG?

14 A In 2019, I think May. I'm not  
15 exactly sure if it was May or June, but it was  
16 around that time in 2019.

17 Q And in general terms, what issues do  
18 you consult NYDIG on?

19 A Bitcoin mostly.

20 Q Does NYDIG pay you?

21 A Yes.

22 Q For all of these consulting

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1 engagements taken together, approximately what  
2 percentage of your income do these constitute?

3 A I'm guessing somewhere in the range  
4 of 30 percent. Maybe for my overall income, 20,  
5 30 percent, something like that.

6 Q And roughly how much of that is from  
7 NYDIG in particular?

8 A The bulk of it.

9 Q Are you aware that NYDIG is owned by  
10 Stone Ridge Asset Management?

11 A Yes.

12 Q Do you have any investments in NYDIG?

13 A No.

14 Q Any other financial interest aside  
15 from their payment of you as a consultant?

16 A No.

17 Q You've promoted NYDIG online before  
18 on your Twitter account, right?

19 A Fair to say.

20 Q Was that a paid promotion?

21 A No.

22 Q Do you know whether NYDIG has ever

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1 acquired or owned XRP?

2 A Not in particular. I don't have  
3 this -- I've never received any information one  
4 way or the other, so I don't know.

5 Q Do you have any reason to doubt that  
6 the NYDIG Basket Fund owned XRP at some time?

7 A No reason to doubt it. I think it's  
8 plausible.

9 Q And do you know whether the parent  
10 company Stone Ridge Asset Management has ever  
11 purchased XRP?

12 A Yes.

13 Q Has it?

14 A Yes, I do. They have.

15 Q Do you know if NYDIG or Stone Ridge  
16 Asset Management are class members in this case?

17 A I don't know if they are, no. I have  
18 no idea.

19 Q Did you do any work to find out if  
20 they are before you took on this engagement?

21 A No.

22 Q Have you done any work to find out



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1 since the time you started this engagement?

2 A No.

3 Q Why not?

4 A It did not cross my mind.

5 Q The next one on the list is Upstream  
6 Data Inc. What work do you do for Upstream Data  
7 Inc.?

8 A I -- I also advise them on Bitcoin  
9 strategy.

10 Q When did that work begin?

11 A I think 2019 as well, but I could be  
12 wrong.

13 Q And does that work continue as of  
14 today?

15 A Yes.

16 Q Do you know if Upstream Data ever  
17 purchased any XRP?

18 A I don't think they have.

19 Q You said you don't think they have.  
20 Do you know for certain one way or the other?

21 A I don't know for certain, but I don't  
22 think they have.

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1 Q The next one you list is Coinbits.

2 What work have you done for Coinbits?

3 A I've also discussed Bitcoin strategy  
4 with them.

5 Q When did your work for Coinbits  
6 begin?

7 A I honestly don't remember the date.  
8 I'm guessing 2020 or 2021.

9 Q And is that work continuing as of  
10 today?

11 A Yes.

12 Q Are you aware that Coinbits suspended  
13 its operations in June of 2023?

14 A Yes.

15 Q What work have you done for Coinbits  
16 since the time they shut down their operations?

17 A I haven't really done much. We have  
18 been discussing -- they have been discussing with  
19 me their strategies for returning to the market.  
20 They want to come back.

21 Q You've promoted Coinbits online as  
22 well, correct?

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1 A Yes.

2 Q Was that a paid promotion?

3 A No, but it was part of my advisory  
4 role with them.

5 Q And your advisory role is a paid  
6 role, right?

7 A No, in this case it was actually  
8 unpaid. I don't get paid with a salary, but I  
9 was given stock options.

10 Q Do you still hold those stock options  
11 today?

12 A I think so, yeah.

13 Q And I think you also identified Block  
14 App as another company you've consulted for.  
15 What work have you done for Block App?

16 A I should say Blockcap. Right, is  
17 that what it is? Yeah.

18 Q Thank you. Blockcap.  
19 What work have you done for them?

20 A I was also a Bitcoin advisor for  
21 them.

22 Q When did that begin?

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1 A In 2021.

2 Q And is that ongoing today?

3 A No.

4 Q When did that end?

5 A Well, Blockcap became Core  
6 Scientific, and then Core Scientific went  
7 bankrupt.

8 Q And you haven't done any work for  
9 them since that bankruptcy; is that right?

10 A Yes.

11 Q Do you know if Blockcap or Core  
12 Scientific is a class member in this case?

13 A I don't know.

14 Q Have you done anything to figure it  
15 out?

16 A I have not, no.

17 Q You also mention GiveBitcoin. What  
18 were the approximate dates of your work for  
19 GiveBitcoin?

20 A That was really brief, a couple of  
21 weeks, and then I just -- and then I stopped  
22 doing it because I realized I didn't have the

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1 time for it.

2 Q And roughly when was that?

3 A 2019 probably.

4 Q Was that a paid engagement?

5 A No. It was compensated by stock  
6 options.

7 Q Do you still have those stock options  
8 today?

9 A Yes.

10 Q I'm not sure I asked you for  
11 Blockcap, so for Blockcap were you paid for that  
12 engagement?

13 A No. It was also stock options.

14 Q And do you still have those today?

15 A No, the company went bankrupt.

16 Q I take it you own Bitcoin.

17 A Yes.

18 Q Have you ever sold any of your  
19 Bitcoin?

20 A I -- I mean, I -- I sell to -- I earn  
21 Bitcoin. A lot of my earnings are in Bitcoin, so  
22 I regularly sell to fund my spending.

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1 Q And when you say to fund your  
2 spending, you mean you convert Bitcoin into fiat  
3 currency that you can use for day-to-day  
4 purchases; is that right?

5 A Yes.

6 Q Do you consider Bitcoin an  
7 investment?

8 A You could say that Bitcoin is an  
9 investment, yes.

10 Q Do you own any other cryptocurrency  
11 besides Bitcoin?

12 A No.

13 Q Have you ever purchased any  
14 cryptocurrency besides Bitcoin?

15 A Yes.

16 Q Which cryptocurrencies have you  
17 purchased?

18 A Litecoin and Ethereum.

19 Q Have you ever purchased XRP?

20 A No.

21 Q When was the last time you bought  
22 either Litecoin or Ethereum, the latest of those?

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1           A           2014.

2           Q           So from 2015 to the present, you've  
3   never bought any cryptocurrencies other Bitcoin;  
4   is that right?

5           A           Correct.

6           Q           Why did you buy Litecoin or Ethereum?

7           A           I was new to the space and I didn't  
8   really understand what was going on, and I just  
9   thought it was worth throwing a few bucks at  
10   them.

11          Q           Have you sold all of your Litecoin  
12   and Ethereum?

13          A           I sold my Litecoin within a few days  
14   or weeks of buying it. And the Ethereum, I lost  
15   it. I lost the passwords for it a long time ago  
16   and have given up to try to find it.

17          Q           To the best of your knowledge, have  
18   any of your immediate family members ever  
19   purchased XRP?

20          A           No.

21          Q           Do you invest in any other financial  
22   assets other than cryptocurrency -- or, sorry,

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1 other than Bitcoin?

2 A No.

3 Q So is it fair to say then that the --

4 A Hang on. Would you include gold as a  
5 financial asset? Then, yeah, if you would  
6 include gold.

7 Q Okay. Is it fair to say then that  
8 your net worth consists of Bitcoin, gold,  
9 physical assets, and your businesses, nothing  
10 else; is that right?

11 A Some dollars as well. Some U.S.  
12 dollars and Jordanian dinars.

13 Q Anything else?

14 A No.

15 Q You're not an accountant, correct?

16 A No, I'm not.

17 Q You're not a certified financial  
18 planner?

19 A No.

20 Q And you're not a chartered financial  
21 analyst, are you?

22 A I am not.



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1 Q You don't hold any professional  
2 certifications that you believe are relevant to  
3 the opinions you've offered in this case, do you?

4 A I guess my PhD degree. Although  
5 that's not a professional certification, right?

6 Q I'm asking specifically about  
7 certifications, you know, things that you take a  
8 test, get accredited for. Do you have any  
9 professional certifications?

10 A No.

11 Q Have you ever provided professional  
12 investment advice to other people?

13 A Not as a professional, no.

14 Q Have you ever provided investment  
15 advice other than as a professional?

16 A Yes. I've told people things.

17 Q What -- what -- what people have you  
18 given nonprofessional investment advice to?

19 A Family and friends.

20 Q And what things have you told them?

21 A Generally the only financial advice  
22 that I ever tell anybody is to hold Bitcoin for

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1 the long term.

2 Q Let's turn to your list of  
3 publications in your CV. For the record, that's  
4 in Exhibit A to Exhibit 174.

5 A Mm-hmm.

6 Q Overall you've published seven  
7 articles in peer-reviewed journals; is that  
8 right?

9 A I guess you could say eight because  
10 one of these is listed here as a working paper,  
11 but it has actually been published in an academic  
12 journal, and that is the fifth -- no, sixth  
13 publication in the list, "Slowdown: Aviation and  
14 Modernity's Lost Dynamism."

15 Q Okay. So you published eight peer-  
16 reviewed articles, right?

17 A Mm-hmm.

18 Q Of those eight -- let's see -- three  
19 of them address biofuels; is that right?

20 A I'd say two.

21 Q And how many of them address  
22 aviation?

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1 A One.

2 Q And three of them address digital  
3 assets, right?

4 A Yes, three. Although there is one  
5 missing from this list.

6 Q What publication is missing from this  
7 list?

8 A "Can cryptocurrencies fulfil the  
9 functions of money?"

10 Q When was that published?

11 A I think 2018. I'm not sure.

12 Q Why didn't you list that on your  
13 publications here?

14 A I don't know. I'm not sure. It  
15 should have been listed.

16 Q Just so the record is clear then,  
17 your four publications on -- that relate to  
18 cryptocurrencies are, 2018, Blockchain  
19 Technology: What is it good for?" 2018, "Can  
20 Bitcoin's Volatility Be Tamed?" 2015, "Economics  
21 Beyond Financial Intermediation," and the  
22 unlisted paper "Can cryptocurrencies fulfil the

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1 functions of money?" Is that right?

2 A Correct.

3 Q Now, none of your peer-reviewed  
4 publications conduct quantitative price impact  
5 analyses, do they?

6 A No.

7 Q None of them apply factor models,  
8 right?

9 A No.

10 Q And none of them apply event studies.

11 A No.

12 Q And the most recent peer-reviewed  
13 article you published was in 2018. Is that  
14 accurate?

15 A I'm not entirely sure if it was 2018  
16 or -- no, I think it was 2018, yeah.

17 Q 2018 is the most recent one you  
18 listed here, right?

19 A Yeah.

20 Q And you've also published three  
21 books, the Principles of Economics, The Fiat  
22 Standard, and The Bitcoin Standard, correct?

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1 A Correct.

2 Q And your opinion in this case relies  
3 on those three books in part, right?

4 A Yes, to an extent.

5 Q And they form part of the basis for  
6 the expertise that you're claiming to bring to  
7 bear on the issues in this case, right?

8 A Yes.

9 Q Now, The Fiat Standard and Principles  
10 of Economics are both self-published, right?

11 A Yes.

12 Q And in particular, the publisher  
13 that's listed on them is Saif House Publishing,  
14 correct?

15 A Yes.

16 Q And you own that?

17 A Yes.

18 Q When did you establish Saif House  
19 Publishing?

20 A 2021 with the publication of The Fiat  
21 Standard.

22 Q And why did you start Saif House

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1 Publishing?

2 A So that I could publish my own books.

3 Q Since the time you started Saif House  
4 Publishing, that has been the only publisher you  
5 have worked through, right?

6 A Yes.

7 Q Now if you could turn forward in  
8 Exhibit 174, there is another section, Exhibit B,  
9 which is the List of Materials Considered. Do  
10 you see that?

11 A Mm-hmm.

12 Q Is this a complete list of the  
13 materials that you considered in preparing your  
14 report for this case?

15 A Yes.

16 Q Did you personally review all of the  
17 documents that are listed here?

18 A Yes.

19 Q So if a document is not listed in  
20 this exhibit, it means that you did not consider  
21 it when forming your opinions, right?

22 A No. That does not follow.

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1           Q           Well, I'm trying to understand all of  
2   the documents you considered in forming your  
3   opinions. Are there any that aren't listed in  
4   Exhibit B to your report?

5           A           Yes. I mean, understanding fields as  
6   complex as digital currencies and economics  
7   requires a significant amount of research and  
8   study that I have performed over many, many  
9   years.

10                   And the -- this appendix refers to  
11   the material directly considered for the writing  
12   of this paper, but that does not equal all the  
13   material considered or all the material that  
14   helped me form my opinions. So I can't cite  
15   every single book of economics, every single  
16   resource on digital currencies.

17           Q           All right. And I'm not asking you  
18   to, you know, try to come up with a list of every  
19   book that you've read over the course of your  
20   career.

21                   But the question I have for you is,  
22   in connection with writing this report, did you

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1 consult any documents that aren't listed in  
2 Exhibit B?

3 A There's my other paper which isn't  
4 listed here but it should have been listed, "Can  
5 cryptocurrencies fulfil the functions of money?"  
6 For some reason that's not listed, but I did  
7 consider that one.

8 Q Anything else?

9 A I do not recall. I -- I might have  
10 looked at some other files that didn't end up  
11 making the cut.

12 Q But as you sit here today, you're  
13 unable to name any other documents that you  
14 considered in connection with writing your  
15 report.

16 A Yes, none that I can recall.

17 Q Right. Have you reviewed the  
18 deposition transcript or video of Allen Ferrell?

19 A Yes.

20 Q Which one, transcript?

21 A Transcript.

22 Q Okay. Is it correct that in forming



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1 your opinions in this case, you did not consider  
2 academic literature concerning XRP or the XRP  
3 Ledger?

4 A No, because my paper "Can  
5 cryptocurrencies fulfil the functions of money?"  
6 is an academic paper, and it also discusses XRP.

7 Q Okay. And that's the one that's not  
8 listed here?

9 A Yes.

10 Q Other than that paper that you wrote,  
11 you didn't consider any other academic literature  
12 concerning XRP or the XRP Ledger in connection  
13 with writing this report, right?

14 A It's not easy for me to determine  
15 that sitting here because I don't have access to  
16 all my files and all the papers that I've read  
17 over the last months.

18 Q Did you make an effort to note which  
19 documents you were considering as you prepared  
20 your report and opinions in this case?

21 A Yes.

22 Q Does the list in Exhibit B reflect

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1 your best effort to compile the list of materials  
2 that you considered in forming your opinions and  
3 writing your report?

4 A Yes.

5 Q Now, Professor Ferrell provided  
6 workpapers and data files to support his expert  
7 report.

8 You didn't review those workpapers  
9 and backup data files in connection with forming  
10 your opinions, did you?

11 A I did.

12 Q You did.

13 A Mm-hmm.

14 Q Approximately when were they provided  
15 to you?

16 A I don't remember.

17 Q What was in the workpapers and data  
18 files that Professor Ferrell produced?

19 A I remember the data for these -- for  
20 the factor analysis that he conducted.

21 Q Anything else you recall?

22 A No.

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1           Q           When did you first learn about this  
2 case?

3           A           I don't remember the date. It was  
4 sometime in the summer. I'm guessing June or  
5 July.

6           Q           And was that when you were first  
7 contacted by counsel?

8           A           Yes. I presume it must have been  
9 July because I think the report was already out  
10 when they contacted me.

11          Q           Did counsel provide you with any  
12 assumptions about facts in this case that you  
13 relied on when forming your opinions?

14          A           I don't recall anything of the sort.

15          Q           Did anybody assist you in writing  
16 your report?

17          A           I mean counsel read it and reviewed  
18 it and offered me notes.

19          Q           So I'm not asking about conversations  
20 with counsel. Putting that aside, did anyone  
21 else assist you in writing your report?

22          A           No.

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1           Q           Your list of materials considered  
2   also includes reports by some of the other  
3   experts that the plaintiffs have introduced in  
4   this case, including the reports of Jeremy Clark,  
5   Steven Feinstein and Joel Seligman. Do you see  
6   that?

7           A           Yes.

8           Q           Did you rely on any of those reports  
9   in forming the opinions you've offered in your  
10   rebuttal report here?

11          A           Yes.

12          Q           Which ones?

13          A           I think -- I mean, I read all three.  
14   I think the one that was the most relevant and  
15   influential was probably Jeremy Clark's.

16          Q           Well, let's take them one at a time  
17   to make it clear.

18                      So you -- you read and relied on the  
19   opinions offered by Jeremy Clark, right?

20          A           I would say so, yeah.

21          Q           Did you rely on the opinions offered  
22   by Steven Feinstein?

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1           A           I don't think so, no.

2           Q           Did you rely on the opinions offered  
3 by Joel Seligman?

4           A           Not to the best of my knowledge. I  
5 don't recall them being very relevant to my  
6 topic. They might be, but I can't remember off  
7 the top of my head.

8           Q           If you were relying on Professor  
9 Seligman's opinions, you would cite his report  
10 and the places where you were relying on them,  
11 right?

12          A           I mean, if I would quote him  
13 directly. But there is a gray area of I may have  
14 learned things from his report that don't  
15 necessarily require a citation.

16          Q           So you think there may be some things  
17 that you learned from Professor Seligman's report  
18 that you're relying on that aren't directly cited  
19 in your opinion; is that right?

20          A           I'm not saying there is. I'm just --  
21 I wasn't just comfortable with the broad brush  
22 dismissal that you had offered, so I was just

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1 qualifying that.

2 Q Well, I'm trying to get exactly what  
3 your testimony is here. My question to you was,  
4 you think there may be some things that you  
5 learned from Professor Seligman's report that you  
6 are relying on that weren't directly cited in  
7 your report; is that right?

8 A I don't think there is. I think the  
9 possibility exists that I may have benefitted  
10 from reading these reports.

11 Q Got it. Thank you.

12 You traveled internationally for your  
13 deposition today, right?

14 A Yes.

15 Q I take it then you have a passport.

16 A Yes.

17 Q Do you have more than one passport?

18 A No.

19 Q Which country is the issuer of your  
20 passport?

21 A Jordan.

22 Q And which country or countries are

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1 you a citizen of?

2 A Jordan.

3 Q Is that it?

4 A Yes.

5 Q Are you a legal resident of any other  
6 countries?

7 A No.

8 Q Your CV indicates that you lived in  
9 Lebanon for some time. Are you legally permitted  
10 to live in Lebanon as of today?

11 A I can go to Lebanon for three months  
12 at a time with my Jordanian passport.

13 Q Did you understand when you accepted  
14 your engagement in this case that you may need to  
15 testify in person at trial if the case reaches  
16 that stage?

17 A Yes.

18 Q And did you understand that the trial  
19 would take place in California, if there is one?

20 A Yes.

21 Q Are you aware of any reason as you  
22 sit here today why you wouldn't be able to travel

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1 to California to testify for trial?

2 A No.

3 Q There are no direct flights from  
4 Jordan to Los Angeles, correct?

5 A No, there aren't.

6 Q Were you aware that defendants  
7 offered to hold your deposition in a U.S. city  
8 with direct commercial flights to or from Jordan?

9 A I think there was a lot of back and  
10 forth on the issue of the deposition.

11 Q Was it your preference to have your  
12 deposition held in Los Angeles?

13 A No.

14 Q Let me sharpen that question. Was it  
15 your preference to have your deposition held in  
16 Los Angeles as compared to any other U.S. city?

17 A No, it doesn't make much of a  
18 difference for me anywhere in the U.S.

19 Q Okay.

20 MR. OPPENHEIMER: Let's go off the  
21 record for a second.

22 THE VIDEOGRAPHER: We're off the



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1 record at 10:52 a.m.

2 (Pause in the proceedings.)

3 THE VIDEOGRAPHER: We're back on the  
4 record at 10:53 a.m.

5 BY MR. OPPENHEIMER:

6 Q Do you have a visa authorizing you to  
7 travel to the United States?

8 A Yes.

9 Q What type of visa?

10 A I'm not entirely sure. I think it's  
11 called a B-1.

12 Q And do you know how long that visa is  
13 valid for?

14 A Yes. Until early 2026.

15 Q Okay. In your report, Exhibit 174,  
16 could you please turn to paragraph 16.

17 A Yes.

18 Q Now, paragraph 16 to 18, the header  
19 on this section is "Summary," right?

20 A Yes.

21 Q And it's fair to say these paragraphs  
22 contain an overview of the opinions you seek to

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1 offer in this case?

2 A Yes.

3 Q Now, in paragraph 16, you refer to  
4 Professor Ferrell's econometric analysis.

5 A Mm-hmm.

6 Q Do you see that?

7 A Yes.

8 Q What do you understand his  
9 econometric analysis to be?

10 A It's the factor model.

11 Q To make this section clearer and  
12 easier, I'm going to give you a copy of Professor  
13 Ferrell's report. It's been previously marked as  
14 Exhibit 149.

15 Now, if you look in Exhibit 149 at  
16 paragraph 54, Professor Ferrell in that paragraph  
17 says: "I also present an alternative  
18 specification," which in the next sentence he  
19 says, "is following the Griffin and Shams 2020  
20 framework."

21 Do you see that?

22 A Yes.

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1           Q           Your report never mentions the  
2   alternative specification based on Griffin and  
3   Shams, does it?

4           A           No.

5           Q           Are you intending to offer a separate  
6   response to that portion of Professor Ferrell's  
7   analysis?

8           A           No.

9           Q           Now, you understand that Professor  
10   Ferrell's opinion in general terms was that  
11   Ripple's actions had no long-term impact on the  
12   price of XRP, right?

13          A           Yes.

14          Q           And you understand that he reached  
15   that conclusion using a factor model, right?

16          A           Yes.

17          Q           You're not offering an opinion that  
18   Professor Ferrell shouldn't have used a factor  
19   model in the first place, are you?

20          A           No.

21          Q           You're not offering an opinion that  
22   he chose the estimation periods for his factor

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1 model, are you?

2 A I am not.

3 Q You're not offering an opinion that  
4 he selected the wrong factors for the factor  
5 model, are you?

6 A Well, what do you mean by "wrong"?

7 Q Are you offering an opinion that  
8 Professor Ferrell included factors that he ought  
9 not to have included?

10 A Ought? For what purpose?

11 Q Do you think that Professor --  
12 withdrawn.

13 Are you offering an opinion that  
14 Professor Ferrell's factor model includes any  
15 factors that by virtue of their inclusion render  
16 his factor model econometrically invalid?

17 A In the way he interprets it, yes.

18 Q Where can I find that opinion in your  
19 report?

20 A (Peruses document.)

21 So the analysis begins with paragraph  
22 49 and continues up until paragraph 61. I would

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1 say the punch line, if you want, is paragraph 58,  
2 59, and 60.

3 Q And so which particular factors did  
4 Professor Ferrell include that, in your opinion,  
5 render his factor model econometrically invalid?

6 A The introduction of the price of --  
7 the introduction of the metrics for the  
8 cryptocurrency market broadly as an independent  
9 variable and a variable exogenous to the actions  
10 of Ripple Labs. Those two variables in my  
11 opinion are endogenous.

12 And so he treats them as if they are  
13 exogenous and concludes that the driver of the  
14 returns is the broader cryptocurrency market  
15 rather than the efforts of Ripple Labs, and I  
16 don't think you can make that conclusion if the  
17 two factors are endogenous.

18 Q So I think I heard you say "metrics  
19 for the cryptocurrency market broadly," but then  
20 you said "two variables." Which two variables  
21 specifically are you talking about?

22 A Efforts of Ripple Labs and the

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1 movements of the cryptocurrency market.

2 Q So in your opinion, Professor Ferrell  
3 should not have included movements of the  
4 cryptocurrency market as a factor in his factor  
5 model; is that right?

6 A Should to what end? I mean, these  
7 normative questions are difficult for me to  
8 answer, because who's shoes am I in to say should  
9 and to what purpose?

10 Q Well, you're offering an opinion, are  
11 you not, that by including that factor, Professor  
12 Ferrell's factor analysis was invalid?

13 A Mm-hmm.

14 Q I need a verbal yes or no.

15 A Yes.

16 Q Would his factor analysis have been  
17 econometrically valid had he excluded those two  
18 factors you just identified?

19 A He can't exclude the first one, which  
20 is the efforts of Ripple Labs, because that's the  
21 one that he's looking to test. So it's not  
22 possible to say that he could perform this test

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1 without that variable.

2 For the second one, I mean, look, he  
3 can perform whatever analysis he wants. The  
4 question is can we draw the conclusion. And if  
5 you're going to use this variable as a metric to  
6 proxy for something that is outside of the  
7 control of Ripple, it doesn't matter that it  
8 is -- it's not -- it doesn't to have just to be  
9 outside the control of Ripple, it has to also not  
10 affect Ripple Labs.

11 Q Do you consider yourself qualified  
12 and capable of performing a factor analysis?

13 A Yes.

14 Q Do you think you could have performed  
15 a factor analysis here that did not include  
16 movements in the broader cryptocurrency market as  
17 a factor?

18 A Sorry. Could you repeat the  
19 question, could I what?

20 Q Do you think you could have performed  
21 a factor analysis here that did not include  
22 movements in the broader cryptocurrency market as

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1 a factor?

2 A I could. Anybody can perform any  
3 analysis with any factor they want, yes.

4 Q You didn't do that, did you?

5 A No.

6 Q Are you offering an opinion that  
7 there is no factor analysis that Professor  
8 Ferrell could have constructed that would have  
9 been econometrically valid to support a  
10 conclusion about the causes for changes in XRP's  
11 price?

12 A No.

13 Q You did not attempt to construct a  
14 factor analysis that would have been  
15 econometrically valid to support such a  
16 conclusion, did you?

17 A No, I did not.

18 Q Is it your opinion that if Professor  
19 Ferrell had excluded the factor on broader  
20 cryptocurrency market movements, that his factor  
21 analysis would have been econometrically valid?

22 A You can't ask me that question



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1 because the analysis rests on this factor. So  
2 you can't remove this factor from the model and  
3 then keep the model accurate because the whole  
4 model estimates this factor.

5 I mean, the conclusions pertain to  
6 Ripple Labs' efforts and the broad cryptocurrency  
7 market. You can't analyze those two things  
8 without a factor for one and factor for the  
9 other. So it's a -- it's a contradictory  
10 question to ask me, Well, if we take this out of  
11 it, it's like taking the apple of the apple pie,  
12 and then what's going to -- will the apple pie be  
13 delicious if it doesn't have apple? Or will it  
14 be an apple pie if it doesn't have apple?

15 Q So are you offering an opinion that  
16 there is no econometrically valid factor analysis  
17 that could be designed to determine whether  
18 Ripple's efforts caused changes in XRP's price?

19 A No. I'm offering an opinion on this  
20 particular econometric analysis.

21 Q Okay. So what factors would  
22 Professor Ferrell need to have included in order

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1 to have an econometrically valid factor analysis  
2 that he could use to determine whether Ripple's  
3 efforts caused changes in XRP's price?

4 A He would've had to find a factor that  
5 proxies for the cryptocurrency market without  
6 being endogenous to the efforts of Ripple --  
7 Ripple Labs.

8 Q Would he have had to change any other  
9 factors or just that?

10 A I think this is the most important  
11 one, and this is the one that he's estimating  
12 primarily.

13 Q Well, you say it's the most important  
14 one. Are there other factors that he would've  
15 had to change?

16 A Well, I mean, look, there are several  
17 parameters and several -- several specifications,  
18 several ways in which he has laid out his  
19 parameters.

20 I can imagine that if I were to take  
21 a deeper look at each one of these, given the  
22 counter -- the hypothetical counter scenario that

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1     you're offering, I may find more things to  
2     change, but none come to my mind at this point.

3             Q       And you haven't listed any others in  
4     your report, right?

5             A       No.

6             Q       No, you haven't?

7             A       I have not.

8             Q       Okay. And your conclusion that the  
9     factor on the broader cryptocurrency market was  
10    inappropriate to include is based on your  
11    analysis that -- or your conclusion that Ripple  
12    Labs can affect the broader cryptocurrency market  
13    beyond XRP; is that right?

14            A       No. It is based on the fact that  
15    Ripple can affect the cryptocurrency broader  
16    market, and more importantly, that the broader  
17    cryptocurrency market can affect what Ripple  
18    does. It's a two-way causality street. And in  
19    order for it to be an exogenous variable, neither  
20    should be affecting the other, neither should be  
21    driving the other. Then we would be able to  
22    discern the statistical impact of each.

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1           Q           So in your view, the only way you can  
2   include a factor that is econometrically valid is  
3   if that factor has no causal relationship in  
4   either direction with the actions that you're  
5   trying to investigate; is that right?

6           A           In the factor model where we're  
7   trying to distinguish the -- the impact of two  
8   particular factors on a price level. If the two  
9   are endogenous, then, yes, you cannot do it.

10          Q           What do you mean when you say  
11   "endogenous factors"? How do you define that  
12   term?

13          A           Endogeneity refers to the phenomena  
14   where changes in one factor can lead to changes  
15   in another factor. An exogenous factor -- two  
16   factors that are exogenous are two factors that  
17   change without affecting one another. Endogenous  
18   factors will affect one another.

19          Q           And it's your opinion that if a  
20   factor model includes endogenous factors, that  
21   it's econometrically invalid; is that right?

22          A           I would say so.

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1 Q What economic literature do you cite  
2 to support that conclusion?

3 A I mean, this is basic econometrics.  
4 I don't particularly -- I don't think I cite any  
5 one in particular about this, but this is basic  
6 econometrics.

7 Q But you don't have any citation for  
8 it, correct?

9 A Not in the report, no.

10 Q And just to be clear, you're not  
11 offering an opinion that Professor Ferrell got  
12 the arithmetic wrong when doing his factor  
13 analysis, right?

14 A I'm not offering that opinion.

15 Q Now, Professor Ferrell also offers an  
16 opinion about Ripple's ODL product. Are you  
17 aware of that?

18 A Yes.

19 Q In terms of ODL, and specifically its  
20 transaction costs, he offers an opinion at  
21 paragraphs 76 and 77 of Exhibit 149.

22 Do you see that?

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1 A Yes.

2 Q Now, you're not offering an opinion  
3 that Professor Ferrell's math was wrong in the  
4 calculations he did there, right?

5 A No.

6 Q You're not offering an opinion that  
7 he was wrong to determine that ODL use increased  
8 over time, are you?

9 A No.

10 Q You're not responding to the  
11 break-even analysis that he conducted in  
12 paragraph 77 and Exhibit 19 of his report, are  
13 you?

14 A I am not.

15 Q And he also opined in paragraph 74 of  
16 his report that ODL's technical efficiency  
17 improved over time.

18 You're not offering a response to  
19 that opinion, are you?

20 A I am not.

21 Q And you're not opining that Professor  
22 Ferrell was wrong to determine that as an

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1 empirical matter, ODL costs decreased over time  
2 as XRP market liquidity improved, are you?

3 A I am not offering an opinion on that.

4 Q Okay. Now, in Section 5A of his  
5 report, Professor Ferrell offers an opinion that  
6 XRP is a virtual currency, right?

7 It's page 31 of the report, if that  
8 helps.

9 A Yes. Yes.

10 Q And your rebuttal in response to that  
11 opinion is expressed in paragraph 70 and 71 of  
12 your report, right?

13 A Mm-hmm. Yes.

14 Q And those two paragraphs contain the  
15 entire substance of your rebuttal opinion there,  
16 correct?

17 A Yes.

18 Q Okay. Now, I want to ask you about  
19 paragraph 52 of your report. This paragraph has  
20 some comments about when Ripple sold XRP on  
21 public exchanges.

22 Do you see that?

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1 A Yes. Yes.

2 Q Is it your intent to offer an opinion  
3 about when Ripple first began selling XRP on  
4 public exchanges?

5 A No, I'm not offering an opinion on  
6 that.

7 Q Okay. Now, in paragraph 52, you say  
8 in the second sentence: "Ripple Labs began  
9 selling XRP on digital asset exchanges in spring  
10 2017."

11 Do you see that?

12 A Yes.

13 Q Would it change your opinion if you  
14 were to learn that Ripple Labs actually began  
15 selling XRP on digital asset exchanges earlier  
16 than that date?

17 MR. ELKHUNOVICH: Objection. Form.

18 You can answer.

19 THE WITNESS: I mean, if I find  
20 contrary information, then yeah, that would change  
21 my opinion.

22 BY MR. OPPENHEIMER:



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1 Q Okay. What methodology did you apply  
2 to reach your opinions in this case?

3 MR. ELKHUNOVICH: Objection. Form.

4 THE WITNESS: I applied my experience  
5 from years of studying digital currencies.

6 BY MR. OPPENHEIMER:

7 Q Anything else?

8 A My understanding of statistics,  
9 econometrics.

10 Q Would somebody else be able to  
11 replicate your methodology then if they didn't  
12 have your exact experience from studying digital  
13 currencies and your exact understanding of  
14 statistics and econometrics?

15 A I think they could do it if they  
16 understand statistics and econometrics, not if  
17 they -- but if they don't have the background in  
18 digital currencies, they should still be able to  
19 do it.

20 Q So walk me through step by step what  
21 methodology, if any, you followed in order to  
22 opine on the validity of Professor Ferrell's

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1 factor analysis.

2 A I started off by reading his model,  
3 understanding what he said, and understanding the  
4 assumptions he built the models on. And then  
5 from my understanding of how the digital currency  
6 market works and how XRP works, I determined that  
7 the endogeneity -- the exogeneity assumption in  
8 his model is not valid.

9 Q Are you offering an opinion that  
10 Ripple's actions caused the price of XRP to  
11 change?

12 A I'm not offering that as an opinion.  
13 I am arguing that the evidence presented by the  
14 report from -- by Profess- -- Professor Ferrell  
15 to prove the contrary is insufficient.

16 Q Okay. So you are not intending to  
17 offer an opinion that any particular actions  
18 Ripple took had an impact on the price of XRP; is  
19 that right?

20 A This was not the scope of my hiring.  
21 I was just told to rebut the report by Professor  
22 Aaron -- Allen Ferrell.

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1 Q Okay. So take a look at paragraph 26  
2 of your report, and footnote 9 in particular.

3 Footnote 9 says: "Ripple's  
4 over-the-counter," parentheses, "OTC," "sales  
5 also had an impact on XRP price."

6 A Mm-hmm.

7 Q Are you offering an opinion that  
8 Ripple's OTC sales affected the price of XRP?

9 A I'm citing the sources that where  
10 members of Ripple themselves are saying this.

11 Q So you're taking that as a factual  
12 assumption based on the sources you cite.

13 A Yes. Based on the fact that they not  
14 only were just discussing this, but they were  
15 actually making decisions -- as we see from these  
16 cited documents, they were deciding the magnitude  
17 of their sales based on the data that they were  
18 getting from the market.

19 Q Okay. So you didn't do any analysis  
20 of your own to figure out whether any of Ripple's  
21 actions affected the price of XRP, correct?

22 A In fact, I did. I went through the

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1 reports that are -- well, I mean I should say the  
2 e-mails. I -- there were several e-mails here in  
3 which members of Ripple Labs had discussed  
4 particular events and their impact, and had  
5 discussed particular relationships between the  
6 price trend of Bitcoin, XRP, ETH, and how it  
7 related to particular events.

8 Q My question is, did you do any  
9 empirical analysis of your own beyond just  
10 looking at e-mails people wrote during the  
11 roughly 2016 through 2022 time period to figure  
12 out whether Ripple's actions had any effect on  
13 the price of XRP?

14 A I did not perform econometric  
15 analysis myself. I analyzed the e-mails and I  
16 analyzed Professor Ferrell's claims.

17 Q Okay. Who selected the e-mails for  
18 you to analyze?

19 MR. ELKHUNOVICH: You can answer  
20 who --

21 THE WITNESS: Counsel.

22 MR. ELKHUNOVICH: -- selected them.

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1 BY MR. OPPENHEIMER:

2 Q Okay. Did you provide any  
3 instructions for the type or content of e-mails  
4 that you wanted to see?

5 MR. ELKHUNOVICH: Objection.

6 I'm going to instruct you not to  
7 answer. That gets into protected Rule 26  
8 territory.

9 MR. OPPENHEIMER: If it's part of his  
10 methodology, I'm not sure it does. But let's see  
11 if we can work around this for a minute, and we  
12 might be able to avoid the question.

13 BY MR. OPPENHEIMER:

14 Q Were there any e-mails or other  
15 documents that you asked to see that were not  
16 provided to you?

17 A No.

18 Q Did you request to review any  
19 particular categories of documents in order to  
20 write your opinion in this case?

21 MR. ELKHUNOVICH: Objection.

22 I'm going to instruct you not to

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1 answer.

2 I don't understand how this is not  
3 Rule 26 stuff. You're asking him without saying  
4 it about my communications with him.

5 MR. OPPENHEIMER: I'm not asking him  
6 for the substance of any communications. I'm  
7 asking him whether he made a request.

8 MR. ELKHUNOVICH: And -- it's  
9 a noncommunication -- noncommunicative request?

10 MR. OPPENHEIMER: The existence of a  
11 communication is not privileged. It's the  
12 substance of the communication that's privileged.

13 MR. ELKHUNOVICH: But you're asking  
14 for substance. You're asking did a request with a  
15 particular substance occur, which is just another  
16 way of asking for substantive communication  
17 between an expert and a -- and counsel in addition  
18 to the process -- the protected process of writing  
19 his report.

20 So, I mean, we've gone for a long time  
21 asking about what he relied on, what he didn't  
22 rely on, and you can keep going for another -- up

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1 to seven hours about that, but I will instruct him  
2 not to answer questions that ask for his  
3 communications with lawyers.

4 MR. OPPENHEIMER: All right. Then  
5 just make the instruction. The question stands.

6 MR. ELKHUNOVICH: Okay. I instruct  
7 you not to answer that question.

8 BY MR. OPPENHEIMER:

9 Q Did you provide any search terms that  
10 you wanted to be used in order to identify  
11 documents for your review?

12 MR. ELKHUNOVICH: I will instruct you  
13 not to answer that question.

14 BY MR. OPPENHEIMER:

15 Q Did you make any effort to review  
16 documents that would have indicated that Ripple  
17 did not affect the price of XRP?

18 MR. ELKHUNOVICH: You can answer yes  
19 or no.

20 THE WITNESS: Sorry, could you repeat  
21 that?

22 BY MR. OPPENHEIMER:

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1 Q Did you make any effort to review  
2 documents that would have indicated that Ripple  
3 did not affect the price of XRP?

4 A I did not make a specific request for  
5 something like that.

6 Q Okay. And what steps, if any, did  
7 you take to determine whether the views of Ripple  
8 employees expressed in the e-mails that you  
9 relied on were in fact accurate?

10 A I presume the papers presented by  
11 counsel are accurate. I don't believe they were  
12 offering me forgeries.

13 Q I'm not asking if they were  
14 authentic.

15 My question is, if you saw an e-mail  
16 such as the one you cited in footnote 9 that we  
17 were talking about, in which a Ripple employee  
18 stated a belief that a particular action affected  
19 the price of XRP, what steps, if any, did you  
20 take to determine whether that employee was right  
21 about that causal relationship?

22 A I think what matters to me is not



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1 whether the employee is right or wrong. For my  
2 econometric critique of Professor Ferrell's work,  
3 I'm simply stating that Ripple Labs was reacting  
4 to the cryptocurrency market. It doesn't matter  
5 if they're analyzing it correctly; it doesn't  
6 matter if they're analyzing it incorrectly. What  
7 matters is that their behavior is affected by the  
8 cryptocurrency market.

9           So whether the e-mails were written  
10 by people who understood correctly what was going  
11 on or not is tangential to the main point. The  
12 main point is are their decisions being affected  
13 by developments in the market. That's what  
14 matters.

15           Q       So if as a factual objective matter  
16 Ripple Labs' actions did not have any affect on  
17 the price of XRP, that wouldn't change the  
18 opinions that you reached because you view that  
19 as a tangential matter; is that right?

20           A       No. This is not something that is  
21 even -- it doesn't make sense in this situation.  
22 You're talking about an entity that is selling

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1 directly into the market. If you're selling and  
2 buying, you are affecting the price. I mean the  
3 magnitude of the effect isn't the question here.  
4 There is no question that any party in a market  
5 is affecting the price, is part of the price  
6 formation process.

7 Q You agree that it is possible for  
8 actions to have a price impact that is so small  
9 it's not even detectible, right?

10 MR. ELKHUNOVICH: Objection. Form.

11 THE WITNESS: It's possible.

12 BY MR. OPPENHEIMER:

13 Q And you also agree that the test  
14 Professor Ferrell ran indicated that there was no  
15 statistically significant non-zero effect on  
16 price, right?

17 A Could you repeat that? I wasn't  
18 quite following your phrasing.

19 Q Professor Ferrell concluded that  
20 there was no statistically significant non-zero  
21 effect of Ripple's actions on XRP's price, right?

22 A I'm sorry. I'm not sure that this is

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1 exactly how he phrased it, and I'm -- I'd  
2 rather -- could you -- could you cite me to the  
3 place where he indicates this in his report?

4 Q Why don't we try it this way.

5 You understand that Professor  
6 Ferrell's report calculates an alpha, right?

7 A Mm-hmm.

8 Q Can you give me your understanding of  
9 what alpha refers to in this context?

10 A Alpha refers to the -- could you  
11 point me to the place where he explains it? I  
12 prefer to go back to the source.

13 Q Well, my question is what's your  
14 understanding of what alpha refers to, not what's  
15 his understanding.

16 MR. ELKHUNOVICH: Are you able to  
17 point him to the report or do you want him to  
18 review it and find it?

19 MR. OPPENHEIMER: I want to know what  
20 his understanding is. If he can't provide that  
21 without reviewing the report, that's fine.

22 BY MR. OPPENHEIMER:

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1 Q But I'm asking for your  
2 understanding, Dr. Ammous.

3 MR. ELKHUNOVICH: You can take your  
4 time and find whatever you need to find.

5 THE WITNESS: Yeah. No, I prefer to  
6 have the exact specification that Professor  
7 Ferrell is -- presents.

8 BY MR. OPPENHEIMER:

9 Q So as you sit here, are you unable to  
10 articulate an understanding of what alpha was  
11 without going back to Professor Ferrell's report?

12 A I can articulate it, but I prefer not  
13 to put words in Professor Ferrell's mouth.

14 MR. ELKHUNOVICH: But I -- but I think  
15 he's making an effort to answer your question, and  
16 while he's doing that, you're asking him others.  
17 If you don't want him to look at a document, and  
18 ask him another question, you can. But I think  
19 he's trying to do something, and I don't think  
20 it's appropriate for you to just keep asking  
21 questions over that.

22 MR. OPPENHEIMER: Well, respectfully,

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1 I don't think he's answering the question I've  
2 asked, and I don't think that's where this is  
3 heading.

4 BY MR. OPPENHEIMER:

5 Q So you just testified that you can't  
6 articulate your understanding --

7 MR. ELKHUNOVICH: Well -- objection.  
8 You will not --

9 MR. OPPENHEIMER: Wait for the  
10 question before you object.

11 MR. ELKHUNOVICH: No, you cannot ask a  
12 question while a question is pending and that he's  
13 trying to answer. You can withdraw that question,  
14 tell him to put whatever he's doing aside, and --

15 MR. OPPENHEIMER: Right now there is  
16 no question because you just interrupted when I  
17 was trying to ask it.

18 MR. ELKHUNOVICH: No --

19 MR. OPPENHEIMER: Let me ask the  
20 question, and you can object without a speaking  
21 objection.

22 MR. ELKHUNOVICH: No.

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1 BY MR. OPPENHEIMER:

2 Q The question, Dr. Ammous --

3 MR. ELKHUNOVICH: Brad, no. You --

4 MR. OPPENHEIMER: Don't talk over me.

5 MR. ELKHUNOVICH: Hold on --

6 MR. OPPENHEIMER: The question -- I

7 withdraw whatever question was out there.

8 MR. ELKHUNOVICH: Great.

9 BY MR. OPPENHEIMER:

10 Q The question now, Dr. Ammous, is --

11 A Mm-hmm.

12 Q -- you just testified you can  
13 articulate your understanding of what alpha was  
14 without going back to Professor Ferrell's report.

15 What's your understanding of what  
16 alpha was in that analysis?

17 MR. ELKHUNOVICH: Objection. Form.

18 THE WITNESS: (Peruses document.)

19 Yeah, so the alpha is the metric that  
20 would show up to -- next to the Ripple-based  
21 efforts, and if it is statistically significant  
22 from zero, then Professor Ferrell claims that it

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1 would suggest that Ripple is not -- Ripple's  
2 efforts are not influential in the development of  
3 the XRP price.

4 BY MR. OPPENHEIMER:

5 Q Were you able to answer that question  
6 without having to refer back to his report?

7 A I understood the concept, of course,  
8 but I prefer to have the exact phrasing that he  
9 uses.

10 MR. OPPENHEIMER: Okay. Let's go off  
11 the record.

12 THE VIDEOGRAPHER: We're off the  
13 record at 11:36 a.m.

14 (Recess.)

15 THE VIDEOGRAPHER: This is the  
16 beginning of media 3. We're on the record at  
17 11:49 a.m.

18 BY MR. OPPENHEIMER:

19 Q Dr. Ammous, in your report,  
20 Exhibit 174, please take a look at paragraph 124.

21 What you write in the last sentence  
22 of paragraph 24 is its escrow of XRP in 2017

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1 created a pop in price.

2 A I'm sorry, what? Created -- where  
3 was this?

4 Q Do you see the last sentence of  
5 paragraph 24?

6 A Yes.

7 Q You write: "Its escrow of XRP in  
8 December 2017 created a pop in price."

9 Do you see that?

10 A Yes.

11 Q What steps, if any, did you take to  
12 determine whether that pop in price was  
13 statistically different from zero?

14 A That was a direct quote from a Ripple  
15 employee. I'm not sure which employee exactly in  
16 this report -- in this one particular source.

17 But I -- as I mentioned earlier, my  
18 analysis does not rest on the specific numerical  
19 impact that Ripple's actions had or any  
20 particular action by Ripple had. My analysis is  
21 purely about the fact that Ripple's actions were  
22 informed by the market. And so that's why this



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1 quotation matters.

2 Q So to be clear, you didn't do any  
3 independent analysis to determine whether that  
4 pop in price was statistically different from  
5 zero, correct?

6 A I did not.

7 Q And you don't know what analysis, if  
8 any, the employee who wrote those words did to  
9 determine whether -- what the causes of the pop  
10 in price were, correct?

11 A I don't remember this particular  
12 e-mail. I don't have it in front of me right  
13 now, but I think the -- I think this one was  
14 quite visible, that you could just see it quite  
15 directly that there was a big rise in the price  
16 after they announced the escrow.

17 Q And do you know what work, if any,  
18 the person who wrote this e-mail did to exclude  
19 possible confounding factors as the cause of this  
20 price change?

21 A I do not recall, no.

22 Q Turn back to footnote 9 in paragraph

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1 26.

2 This is where you cite an e-mail in  
3 support of the proposition that OTC sales also  
4 had an impact on XRP price. You didn't do any  
5 analysis to determine whether that impact was  
6 statistically significantly different from zero,  
7 did you?

8 A No, I did not.

9 Q And you don't know what, if any,  
10 analysis the person who wrote the e-mail did to  
11 determine the impact on XRP price, did you?

12 A They did include some numbers in  
13 this. I mean I saw their analysis that they had  
14 included.

15 Q And what, if anything, did the people  
16 who wrote this e-mail do -- well, withdrawn.

17 What, if anything, did the person who  
18 wrote that e-mail do to exclude possible  
19 confounding factors?

20 A I do not remember.

21 Q Turn to paragraph 59 of your report.

22 In the second sentence in this

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1 paragraph, you write: "When Ripple Labs sells  
2 some of its XRP tokens, that would be likely to  
3 cause all XRP tokens to decline in value."

4 Do you see that?

5 A Yes.

6 Q Are you offering an opinion that  
7 Ripple's sales of XRP actually caused the price  
8 of XRP to decline?

9 A "Likely" is the word that I use.

10 Q So my question is, are you offering  
11 an opinion that the sales actually caused the  
12 price of XRP to decline?

13 A No. Likely.

14 Q Can you quantify how likely?

15 A No.

16 Q The next sentence says: "This would  
17 be likely to cause losses for XRP holders who  
18 might react by reducing their allocation to other  
19 digital assets or liquidating their entire  
20 portfolio."

21 Do you see that?

22 A Yes.

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1           Q           You use the word "likely" in that  
2     sentence again. Is it fair to say you're not  
3     offering an opinion that Ripple's sales of XRP  
4     actually caused losses for XRP holders?

5           A           I'm saying they could. They are  
6     likely to do that. It doesn't -- it follows that  
7     I'm not saying that it is certain that it would.

8           Q           And you can't quantify that  
9     likelihood either, can you?

10          A           No.

11          Q           If you look ahead to the next  
12     sentence: "On the other hand, if Ripple Labs  
13     were to purchase a sum of XRP, that would likely  
14     raise the price of XRP."

15                    Again, you use the word "likely"  
16     there. Are you able to quantify the likelihood  
17     of this result that you described?

18          A           No. I don't think you can produce  
19     numerical estimates of these kind of  
20     probabilities.

21          Q           Okay. You opine in paragraph 59 that  
22     changes in the price of XRP can cause changes in

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1 the prices of other cryptocurrencies like  
2 Bitcoin, right?

3 A Yes.

4 Q Under the logic that you've applied  
5 there, does it follow that changes in the price  
6 of Bitcoin affect the price of XRP?

7 A I would say so, yeah, slightly.

8 Q Now, I'd like to direct your  
9 attention to paragraphs 26 through 29 of your  
10 report, Exhibit 174.

11 A Mm-hmm. Okay.

12 Q These paragraphs make some statements  
13 about how Ripple understood that its actions  
14 related to XRP price or impacted XRP price citing  
15 documents from the record, right?

16 A Yes.

17 Q And I think we made clear you are not  
18 offering an opinion that Ripple actually affected  
19 the price of XRP, just that it believed that its  
20 actions were impacting XRP; is that right?

21 A Well, I'm also offering an opinion  
22 saying that Professor Ferrell's evidence against

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1 the contention that Ripple's actions affect XRP  
2 is not satisfactory. It's not convincing.

3 So I would say the null hypothesis  
4 and the common sense starting point is that an  
5 entity that owns more than a half and at some  
6 point owns 100 percent of the supply of something  
7 is likely going to have enormous impact on the  
8 price.

9 So the -- this -- this I believe is  
10 the reasonable starting point for the analysis,  
11 and the onus of proof is on Professor Ferrell to  
12 present convincing, compelling counterevidence to  
13 this, and I believe he fails.

14 So I fall back on the common sense  
15 position that an economist would have, which is  
16 that somebody who is able to affect -- to sell  
17 such significant quantities of a good has an  
18 impact on it.

19 Q And what you're doing in these  
20 paragraphs is describing Ripple's belief that it  
21 could affect the price of XRP; is that right?

22 A Yes.

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1           Q           Now, in paragraph 48 of your report,  
2   if you look at the very last sentence --

3           A           Mm-hmm.

4           Q           -- you see it says: "Ripple  
5   intentionally aligned its company with XRP's core  
6   principles."

7                        You see that?

8           A           Yes.

9           Q           That's an assertion about what Ripple  
10   intended, right?

11          A           Yes.

12          Q           What analysis did you conduct to  
13   determine what Ripple intended?

14          A           This is from their own -- from the  
15   reference -- I don't have the reference in front  
16   of me now, but I presume this was internal  
17   communication or a presentation to other clients.

18          Q           So you reached that conclusion from  
19   reading the document that you cite there; is that  
20   right?

21          A           Yes.

22          Q           Turn to paragraph 66, please.

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1                   In the first sentence of this  
2 paragraph you write: "Ripple Labs thus  
3 manufactures market demand through its ODL scheme  
4 itself to intentionally impact XRP price."

5                   What did you do to conclude that  
6 Ripple was intending to impact XRP price through  
7 ODL?

8           A           If you go to paragraph 50 -- 64, and  
9 you see several sources there where Ripple Labs  
10 understands that ODL XRP origination, that any  
11 significant scale to have a negative impact on  
12 XRP price."

13                   Later on, we see: "Ripple Labs  
14 acknowledge that programatic sales are done  
15 without liquidators directive to minimize market  
16 impact, while ODL XRP origination orders are  
17 effectively market sell orders that would  
18 aggressively hit the open order book. XRP  
19 selling via XRPO has left a negative pressure on  
20 XRP."

21                   And then finally, the last line:  
22 "Ripple Labs' CEO ultimately approved Ripple



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1 Labs' XRP buyback initiative."

2 Q So you reached that conclusion by  
3 reading the documents cited in paragraph 64. Is  
4 that right?

5 A Yes.

6 Q Let's turn back to paragraph 29 now.  
7 What you write in paragraph 29 in the  
8 first sentence -- first two sentences are:  
9 "Professor Ferrell did not measure short-term  
10 price impact, nor did he measure XRP supply  
11 inflation. However, Ripple Labs did, and Ripple  
12 Labs understood its sales behavior had a  
13 measurable impact on XRP price."

14 Do you see that?

15 A Yes.

16 Q When you say "Ripple Labs did," what  
17 is that referring to? Ripple Labs did what?

18 A They measured the supply inflation  
19 and the short-term price impact of the supply  
20 inflation.

21 Q How do you find short -- how do you  
22 define "short-term price impact"?

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1           A           I would say short term would be  
2    around three months or under six months.

3           Q           Under six months is short term?

4           A           (Witness nods.)   Yeah.

5                    But that's -- that's a subjective  
6    definition.   You could -- it depends on the  
7    context.   In some contexts a day could be  
8    considered short term, and in some -- other  
9    contexts it could be a year.

10          Q          Well, I'm asking you.   You know,  
11    you've held yourself out as an expert in this  
12    field in this case.   How do you define "short  
13    term" as you've used that phrase in this  
14    paragraph?

15          A          Quarterly.

16          Q          Quarterly.   Okay.

17          A          Yeah.

18          Q          Do you know what term Professor  
19    Ferrell measured when he was looking at XRP price  
20    returns?

21          A          Dollar price.

22          Q          I mean what time period in terms of

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1 long and short term.

2 A Oh. He looked at monthly returns.

3 Q Okay. That would be short term under  
4 your definition, wouldn't it?

5 A Yes.

6 Q Do you think that Ripple Labs  
7 measured a shorter term impact than Professor  
8 Ferrell did?

9 A I think in some of these e-mails,  
10 yes, they do.

11 Q Well, in fact, the e-mail that you  
12 cite also uses monthly figures in order to do its  
13 analysis; isn't that right?

14 A I don't have the e-mail in front of  
15 me now, but I'll take your word for it.

16 Q Well, I don't want you to take my  
17 word.

18 So let's mark this one as an exhibit.  
19 I think we're on 182. Yeah, 182.

20 (Exhibit No. 182 was marked for  
21 identification.)

22 BY MR. OPPENHEIMER:

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1           Q           And in Exhibit 182 -- well, let's  
2   just make the record clear first. Exhibit 182 is  
3   a document with Bates number RPLI\_00499634.

4                   That's the document that you cited in  
5   paragraph 29, right?

6           A           Yes.

7           Q           And if you turn to the page ending  
8   with Bates number 639.

9           A           Mm-hmm.

10          Q           What you'll see there is -- in the  
11   third sentence, it says: "For much of the  
12   analysis conducted, we analyzed monthly aggregate  
13   data rather than daily figures."

14                   Do you see that?

15          A           Yes.

16          Q           That's the same time period that  
17   Professor Ferrell looked at when he was doing his  
18   analysis, isn't it?

19          A           Mm-hmm.

20          Q           That's a "yes"?

21          A           Yes.

22          Q           And in fact, Professor Ferrell also

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1 ran his model using weekly returns, didn't he?

2 A I think that is the case.

3 Q Well, if I can direct you to

4 Exhibit 149, the Ferrell report, paragraph 32.

5 A 32?

6 Q Yeah.

7 Do you see there, he says: "I show  
8 the robustness on my factor model to weekly and  
9 30-day monthly sampling frequencies."

10 A Okay.

11 Q Right?

12 A Okay.

13 Q So you agree a weekly interval is  
14 more short term than a monthly interval, right?

15 A Yes.

16 Q I'd like to direct you now to  
17 paragraph 22 of your report.

18 The last sentence of paragraph 22  
19 says: "The fact that Ripple Labs has spent years  
20 selling these tokens at a slow pace has fostered  
21 and established an expectation among XRP buyers  
22 that Ripple Labs will not sell all its holdings

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1 at once."

2 Do you see that?

3 A Yes.

4 Q What methodology, if any, did you use  
5 to determine the expectations of XRP buyers?

6 A I've spoken to a few over -- over  
7 time.

8 Q Did you speak to any after you were  
9 engaged in this case?

10 A No.

11 Q When did you speak to the XRP buyers  
12 you're referring to here?

13 A I've spoken to several over the  
14 years. So starting, I would say, since 2016  
15 until -- until this case, I've spoken to several.

16 Q How many?

17 A Very difficult to count. Definitely  
18 more than ten between in person and online.

19 Q Was it more than 50?

20 A Probably not.

21 Q Okay. And how did you go about  
22 selecting the XRP purchasers that you talked to?

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1           A           I -- there was no -- there was no  
2   research methodology involved here. There were  
3   just the conversations that I would happen to  
4   have with people who talked to me about digital  
5   currencies and end up holding Ripple. This is  
6   the kind of general impression that I got from  
7   them.

8                   I should add also this is also  
9   something that you get from the e-mails that we  
10   cite in this report where Professor Ferrell --  
11   sorry, where Ripple staff are discussing these  
12   things with each other, and they seem particular  
13   about the importance of establishing this kind of  
14   expectation among Ripple holders.

15           Q           Can you give me the names of any of  
16   the XRP buyers that you talked to in order to  
17   form that belief?

18           A           Mmm. I mean, mostly they were people  
19   online that I would have discussed this with  
20   fleetingly. So -- some old discussions that I've  
21   had online.

22           Q           As you sit here today, can you give

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1 me any name of any of those XRP buyers you spoke  
2 with?

3 A I mean, I can give you a couple on a  
4 first name basis, but I don't know the last  
5 names, people I spoke to in person. And then  
6 online it's just, you know, avatars that show up  
7 on Twitter or Facebook or -- so I don't really  
8 remember, no.

9 Q Okay. So as you sit here today, you  
10 don't remember the names of any of the XRP buyers  
11 you spoke to to form that view?

12 A No.

13 Q All right. Are you aware that there  
14 are XRP buyers who said under oath that they  
15 didn't even know Ripple existed when they bought  
16 their XRP?

17 A I'm not aware of that.

18 Q Are you offering an opinion that  
19 those buyers still somehow expected that Ripple  
20 wouldn't sell all of its holdings at once?

21 A I'm not offering that opinion.

22 Q Let's go over to paragraph 70 of your



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1 report.

2                   The third sentence of paragraph 70  
3 says: "The fact that Ripple Labs holds such a  
4 large stake in XRP will also prevent it from  
5 achieving wider adoption, as investors are  
6 unlikely to want to store wealth in a digital  
7 asset whose value can be controlled by the  
8 creators controlling a significant part of the  
9 supply."

10                   How do you measure how widespread the  
11 adoption of XRP or any other digital asset is?

12           A           For me I think the most reliable  
13 metric for that is the dollar price of the token  
14 multiplied by the number of the token that is in  
15 circulation.

16           Q           You don't offer that definition in  
17 your report, do you?

18           A           No.

19           Q           When you say in paragraph 70 that  
20 this will prevent it from achieving wider  
21 adoption, wider than what? What do you mean by  
22 that?

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1           A           Significantly wider than what it  
2    is -- or I should say -- when I say that, I  
3    probably mean it in comparison to Bitcoin.

4           Q           Okay. So what you're saying in this  
5    sentence in paragraph 70 is the fact that Ripple  
6    Labs holds such a large stake in XRP will also  
7    prevent XRP from achieving wider adoption than  
8    Bitcoin; is that right?

9           A           I mean, I think the term "wider  
10   adoption" here is -- it's a generic term that  
11   refers to a growing amount of adoption worldwide,  
12   but could also be construed as referring to wider  
13   than Bitcoin adoptions, since Bitcoin is  
14   effectively the -- the standard when looking at  
15   digital currencies. It's the measuring stick  
16   against which they all have to measure up.

17          Q           Well, which way did you intend it to  
18   be read here? You wrote those words.

19          A           I think it goes both ways.

20          Q           You agree that Ripple Labs owned more  
21   XRP in 2013 than it does today, right?

22          A           Yes.

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1           Q           Do you also agree that XRP is more  
2   widely adopted today than it was in 2013?

3           A           Yes.

4           Q           Do you think that Ripple's holdings  
5   of XRP didn't become an impediment to wider  
6   adoption until sometime after 2013?

7           A           I'm not sure I quite -- I'm not quite  
8   sure I follow the question.

9           Q           Well, in the third sentence of  
10   paragraph 70, you say: "The fact that Ripple  
11   Labs holds such a large stake in XRP will also  
12   prevent it from achieving wider adoption."

13                    You agree that Ripple Labs held a  
14   larger stake in XRP in 2013, right?

15          A           Mm-hmm.

16          Q           And you agree that that didn't  
17   prevent it from achieving wider adoption between  
18   2013 and today, right?

19          A           Okay. Yeah.

20          Q           What analysis did you do to determine  
21   whether Ripple Labs' holdings of XRP will prevent  
22   XRP from achieving wider adoption in the future?

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1           A           I'd say if you compare Ripple over  
2   the -- over the past 10 years from 2013 until  
3   today, it's -- it has not grown as much as  
4   Bitcoin has grown, and it contains -- it  
5   continues to be decidedly smaller than Bitcoin,  
6   even though it has a lot of marketing activity to  
7   promote it. It has an active lab behind it that  
8   is pushing it, which Bitcoin does not have, and  
9   yet XRP cannot catch up to Bitcoin.

10          Q           What analysis did you do to determine  
11   that that's due to the stake that Ripple Labs  
12   holds as opposed to any other factor?

13          A           Well, that I would refer you to my  
14   earlier paper, "Can cryptocurrencies fulfil the  
15   functions of money?" And in that paper early on,  
16   I think I point out the fact that this giant  
17   stash of coins held by Ripple Labs is going to  
18   always alienate a lot of people who might  
19   consider buying it.

20          Q           Did you do any analysis to determine  
21   whether XRP outperformed Bitcoin from the period  
22   after you published that 2016 paper until today?

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1           A           Yes. Actually, if you look at the  
2    dates, it depends on where you calculate it, but  
3    their performance isn't that different.

4           Q           So their performance is not that  
5    different from the time you wrote the paper until  
6    today?

7           A           Mm-hmm.

8           Q           In the third sentence of paragraph  
9    70, going to the rest of the sentence, you also  
10   say: "Investors are unlikely to want to store  
11   wealth in a digital asset whose value can be  
12   controlled by the creators controlling a  
13   significant part of the supply."

14          A           Mm-hmm.

15          Q           Are you stating here that Ripple can  
16   control the value of XRP?

17          A           Yes. If they'd sell all of their  
18   Ripple -- if they sell all of their XRPs today, I  
19   am highly confident that it would cause a massive  
20   crash in the price.

21          Q           Do you know whether it is even  
22   possible for Ripple to sell all of its XRP today?

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1 A Yes, it is possible.

2 Q You're familiar with the XRP escrow  
3 that was established in 2017, right?

4 A Yes.

5 Q How can Ripple sell all of its XRP  
6 today if most of it is locked in the escrow?

7 A They can unlock it and sell it.

8 Q How can Ripple unlock it?

9 A They can do it.

10 Q What analysis did you do to figure  
11 out that Ripple can unlock the escrow?

12 A Well, they locked it. They locked  
13 it, they put it there, so they can unlock it.

14 Q How was the escrow created?

15 A I think the -- there is a document  
16 here in which they discuss the creation of the  
17 escrow. But it was I think through a smart  
18 contract.

19 Q And what analysis did you do to  
20 determine whether the XRP Ledger allows Ripple  
21 acting alone to unlock that smart contract?

22 A That analysis is a result of the

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1 discussion of -- let me point it out here.

2 So the analysis in the Clark expert  
3 report on the degree of Ripple Labs's control  
4 over the protocol I believe is quite compelling  
5 that in the same way that they are able to escrow  
6 those coins, they -- if they chose to, they can  
7 release the escrow.

8 Q So this view depends on the opinion  
9 that Professor Clark offered; is that right?

10 A The opinion that Professor Clark  
11 offered as well as my understanding and knowledge  
12 of how Ripple Labs and XRP have operated since  
13 their creation.

14 Q I'll represent to you that Professor  
15 Clark's opinion never says that Ripple can unlock  
16 the XRP escrow unilaterally.

17 Is that your inference based on your  
18 understanding of his opinion?

19 A Yes, it's my understanding of how  
20 digital currencies work. At the end of the day  
21 it's all code, so if you can change the code, you  
22 can change everything. They could change the

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1 supply, they could decrease the supply. They can  
2 lock it up, they can unlock it.

3 Q And if Ripple can't change the code,  
4 then it can't unlock its XRP from the escrow; is  
5 that right?

6 A Yes. But I think the only digital  
7 currency where you could make a coherent case  
8 that there is no central authority that can  
9 change the code is Bitcoin.

10 Q Okay. Let's go to paragraph 68 of  
11 your report.

12 Paragraph 68 is one sentence. It  
13 says: "In addition, the XRP Ledger itself relies  
14 heavily on Ripple's efforts," and the footnote  
15 points to the Clark report.

16 Do you see that?

17 A Yes.

18 Q What efforts in particular do you  
19 think the XRP Ledger relies on from Ripple?

20 A The maintenance of the large -- of a  
21 number of nodes and the programming of the  
22 software for the nodes. And I think there's -- I



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1 think from the -- all of the contributors on the  
2 GitHub page, I think -- I forget the exact  
3 number, but it's mentioned in the Clark's report  
4 that the vast majority of contributors on the  
5 GitHub have either -- have been associated with  
6 Ripple Labs at a certain point in time.

7 Q You mentioned the number of nodes  
8 that Ripple maintains.

9 How many nodes are on the Unique Node  
10 List either as of today or as of the date of the  
11 Clark report?

12 A I don't remember.

13 Q Do you know how many of those nodes  
14 on the Unique Node List are operated by Ripple?

15 A I don't remember.

16 Q Would it surprise you to learn that  
17 there is only a single node on the Unique Node  
18 List operated by Ripple?

19 A It wouldn't surprise me much because  
20 there's a difference between what is officially  
21 operated by Ripple and what is not officially  
22 operated.

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1           Q           So you think Ripple unofficially  
2     operates additional nodes on the Unique Node  
3     List; is that right?

4           A           I don't necessarily think that that  
5     is the case. I think it's a possibility.

6           Q           And what work have you done to either  
7     confirm or refute that possibility?

8           A           The work that I've done is that I  
9     look -- I compare it to Bitcoin, where Bitcoin  
10    has tens of thousands of nodes all over the  
11    world. And I think that's what has made -- over  
12    the past 15 years what has made Bitcoin so  
13    difficult to change, and that's why Bitcoin  
14    really is immutable and decentralized. And  
15    having looked at other digital currencies, I know  
16    that they don't have that level of  
17    decentralization that would make them so  
18    difficult to alter.

19          Q           Let's go back to paragraph 48 of your  
20    report.

21          A           Mm-hmm.

22          Q           In this paragraph, about a third to a

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1     halfway through, you write -- yeah, let me give  
2     you better directions.

3                     Starting at the end of the fifth  
4     line --

5             A             Mm-hmm.

6             Q             -- you write: "The fact that Ripple  
7     Labs and their associates are able to  
8     significantly influence protocol development  
9     means the entire economic value of the XRP Ledger  
10    depends on Ripple Labs and its actions."

11                    Do you see that?

12            A            Yes.

13            Q            What associates are you referring to  
14    in that sentence?

15            A            Various people that have been  
16    associated with Ripple Labs.

17            Q            Who?

18            A            I don't particularly have exact names  
19    at this point, but I would assume the people that  
20    have received funding from Ripple Labs or the  
21    people who were involved in the creation of XRP.

22            Q            You refer to the entire economic

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1 value of the XRP Ledger. Are you distinguishing  
2 here between the value of the XRP Ledger and the  
3 value of the sum total of units of XRP?

4 A No.

5 Q So is it your view then that the XRP  
6 Ledger has no economic value beyond the total  
7 value of all units of XRP?

8 A I would say so.

9 Q What analysis did you do to reach  
10 that conclusion?

11 A That's -- the token of the ledger is  
12 the value of the ledger. It's how the thing is  
13 valued. It's true for Bitcoin. It's true for  
14 Ripple.

15 Q Do you understand Professor Ferrell  
16 to be offering any opinion about the economic  
17 value of the XRP Ledger?

18 A Yes.

19 Q Where is that in Professor Ferrell's  
20 report?

21 A His opinion is on whether the value  
22 of that ledger is influenced by Ripple Labs'

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1 actions.

2 Q I see. And that's based on your view  
3 that the value of the ledger is equal to the  
4 value of all XRP?

5 A Mm-hmm.

6 Q Okay. Do you understand Professor  
7 Ferrell to be offering any opinions on whether  
8 Ripple controls the XRP Ledger?

9 A In terms of its economic value, yes.

10 Q Right. I understand that you're  
11 offering opinion that Ripple -- that Professor  
12 Ferrell is wrong because Ripple controls the  
13 value of XRP.

14 My question is a little bit  
15 different, so let me try to sharpen it.

16 Are you offering -- or withdrawn.

17 Did you understand Professor Ferrell  
18 to be offering any opinions about whether Ripple  
19 controls the operation of the XRP Ledger?

20 A I find it hard to separate the price  
21 of the token from the operation of the ledger, so  
22 I can't say no. I would say yes.

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1                   And what he's describing in terms of  
2   the relationship between the actions of Ripple  
3   Labs and the price of XRP, I would include that  
4   under the -- a broad banner of the value of the  
5   ledger and control of the ledger.

6           Q       Did you independently -- withdrawn.  
7                   You've already testified about your  
8   review of Professor Clark's report. I want to  
9   ask you a little bit more about that.

10                   Did you ever independently evaluate  
11   Professor Clark's methodology that he used in  
12   forming his opinions?

13           A       I assessed it, and I couldn't -- it  
14   confirms the ideas that I have developed over the  
15   years of analyzing and studying.

16           Q       What did you do to assess Professor  
17   Clark's analysis?

18           A       I read it and analyzed it.

19           Q       How did you analyze it?

20           A       By reading it and checking the  
21   accuracy of the information in certain cases, and  
22   reading other sources of material on the topic.

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1 Q You don't have any computer science  
2 degree, do you?

3 A No.

4 Q Did you do any independent testing to  
5 evaluate the conclusions that Professor Clark  
6 reached?

7 A No.

8 Q Did you review the underlying data  
9 that Professor Clark reviewed?

10 A No, but I don't believe it was a  
11 heavily data centric paper that he described.  
12 There wasn't a lot of econometric analysis in it,  
13 as far as I can recall.

14 Q Did you review the computer science  
15 literature that Professor Clark cited in his  
16 report?

17 A Off the top of my head, I can't  
18 remember.

19 Q So sitting here today, you don't  
20 recall reading any computer science papers in  
21 connection with that review; is that right?

22 A I don't think so.

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1           Q           Let's go to paragraph 30 of your  
2   report.

3                   MR. OPPENHEIMER:   Actually, let me  
4   give you a choice.   I'm about to start a new  
5   topic.   We can do that for a little bit or we can  
6   stop here and get lunch.   What would you prefer?  
7   Hardest question of the day?

8                   THE WITNESS:   I'm honestly easy.  
9   Either way.   If anybody has any strong  
10   preferences, I'm happy to go whichever way.

11                  MR. OPPENHEIMER:   Anyone?

12                  MR. ELKHUNOVICH:   We can -- what are  
13   the options?   We can keep going --

14                  MR. OPPENHEIMER:   Stop now or go a  
15   little longer.

16                  MR. ELKHUNOVICH:   Let's go a little  
17   longer --

18                  MR. OPPENHEIMER:   Okay.

19                  MR. ELKHUNOVICH:   -- if that's going  
20   to get us toward the end faster.

21                  MR. OPPENHEIMER:   Sure.

22   BY MR. OPPENHEIMER:



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1 Q Okay. Now, paragraphs 30 to 47, in  
2 general terms, are discussing monetary theory.

3 Is that a fair statement?

4 A Yes.

5 Q And paragraphs 30 to 44 discuss  
6 monetary theory sort of in the abstract, and then  
7 you have some Ripple specific conclusions in  
8 paragraphs 45 to 47; is that right?

9 A I believe that's fair.

10 Q Okay. Now, the Ripple specific  
11 conclusion that you offer is that the only  
12 purpose behind XRP is to finance Ripple's  
13 operations; is that right?

14 A The only purpose behind XRP sales.

15 Q Yes, thank you.

16 The only purpose behind XRP sales is  
17 to finance Ripple's operations, that's the  
18 opinion you're offering, right?

19 A Yes.

20 Q Is it your opinion that every single  
21 time Ripple sold XRP, it was doing so to finance  
22 its own operations?

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1 A No.

2 Q Do you agree that Ripple could have  
3 sold XRP at various times for other purposes?

4 A Potentially. I mean, I guess you  
5 could argue that the initial allocation to the  
6 people who made the XRP Ledger is an example  
7 where it's not about financing Ripple's  
8 operation. The first 20 million -- 20 billion I  
9 think that they allocated.

10 Q What about from 2017 to 2023, is it  
11 your opinion that every sale of XRP by Ripple in  
12 that time period was to finance Ripple's  
13 operations?

14 A I -- I don't know what the purpose  
15 was of every particular sale, but I would say  
16 that the only conceivable rationale for the idea  
17 of selling XRP at this point is to finance  
18 Ripple's operation.

19 Q Do you understand Professor Ferrell  
20 to be offering any opinion about whether the  
21 purpose of Ripple's sales was to finance its  
22 operations?

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1           A           I don't believe he offered that  
2     opinion on that, as far as I can tell.

3           Q           Well, what expertise do you have in  
4     determining the reasons why a company sells  
5     assets?

6           A           As an economist, I understand that  
7     companies try -- companies exist to maximize the  
8     financial well-being of their principals, the  
9     people who own them.

10          Q           Any other basis of expertise?

11          A           I mean, being an economist, yeah.

12          Q           That's it, correct?

13          A           Pretty much, yeah.

14          Q           Okay. Now, your discussion of  
15     monetary theory in paragraphs 30 through 47 is  
16     based on Austrian School of economics principles,  
17     right?

18          A           Not exclusively but predominantly,  
19     yes.

20          Q           It's also based on economic  
21     principles set out in the books you published,  
22     right?

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1 A Yes.

2 Q Is it fair to say mainstream  
3 economists would reject many of the principles  
4 you describe in this section?

5 A Yeah, there will be economists who  
6 will disagree with it, but, you know, economists  
7 are a disagreeable bunch in general.

8 Q Well, my question isn't whether you  
9 could find an individual to disagree. My  
10 question is, is it fair to say mainstream  
11 academic economists generally would reject many  
12 of the principles you describe in this section?

13 A Yes.

14 Q Okay. Is there -- withdrawn.  
15 Now I'd like to take you to paragraph  
16 49 of your report.

17 A Mm-hmm.

18 Q In the first sentence here, you  
19 write: "Professor Ferrell claims that the  
20 plaintiffs' case is a testable economic  
21 hypothesis, but provides little compelling  
22 argument for why it is testable in the way he

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1 presents it."

2 Do you see that?

3 A Yes.

4 Q Now, Professor Ferrell in his report,  
5 Exhibit 149, at paragraph 16, says, in substance,  
6 that market expectations can be measured through  
7 price, and therefore plaintiffs' case, which  
8 describes market expectations, can be measured by  
9 looking at XRP's price.

10 Do you understand Professor Ferrell  
11 to be offering that argument?

12 A Sorry. I think I lost you there for  
13 a minute.

14 Could you repeat that, please?

15 Q Sure. And you can reference  
16 paragraph 16 of his report if it's helpful.

17 A Sixteen?

18 Q Yes, one six.

19 Professor Ferrell is offering an  
20 opinion that plaintiffs' case describes market  
21 expectations. Market expectations can be  
22 measured through price, and therefore plaintiffs'

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1 case can be evaluated by looking at XRP's price.

2 Is that your understanding of -- of  
3 what he's opining here?

4 A Yes.

5 Q Are you offering an opinion that an  
6 assets price doesn't say anything about market  
7 expectations?

8 A No.

9 Q Are you offering an opinion that you  
10 cannot test plaintiffs' case as an empirical  
11 matter?

12 A No.

13 Q Are you offering an opinion that the  
14 plaintiffs' case does not present a testable  
15 economic hypothesis?

16 A No.

17 Q So if you turn back to paragraph 49  
18 in your report, the third sentence of that  
19 paragraph says: "However, the underlying  
20 econometric analysis, even if it were accurate,  
21 does not support this sweeping conclusion."

22 When you say "even if it were

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1 accurate," is that referring to Professor  
2 Ferrell's inclusion of the broader cryptocurrency  
3 market factor that we discussed earlier?

4 A Yes -- no. I'm sorry. What exactly  
5 am I --

6 Q That -- sorry, go ahead.

7 A What exactly are you asking is  
8 referring to that?

9 Q Yeah, I -- it wasn't a very good  
10 question. Let me give you a better one.

11 You say: "The underlying econometric  
12 analysis, even if it were accurate, does not  
13 support this sweeping conclusion."

14 Are you offering an opinion that  
15 Professor Ferrell's underlying econometric  
16 analysis is not accurate?

17 A No.

18 Q Okay. Now, you're not contesting  
19 Professor Ferrell's conclusions about which of  
20 his factors had or didn't have statistically  
21 significant relationships with XRP's price  
22 returns, are you?

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1           A           I'm not contesting that.

2           Q           Okay.

3                   MR. OPPENHEIMER: I think this is a  
4   good break point. Let's go off the record.

5                   THE WITNESS: All right, cool.

6                   THE VIDEOGRAPHER: We're off the  
7   record at 12:38 p.m.

8                   (Lunch recess.)

9                   THE VIDEOGRAPHER: This marks the  
10   beginning of media number 4. We're back on the  
11   record at 1:31 p.m.

12   BY MR. OPPENHEIMER:

13           Q           Dr. Ammous, I would like to turn your  
14   attention to paragraph 58 of your report.

15                   You testified earlier a bit about  
16   endogeneity, and in this paragraph in the third  
17   sentence, you write: "Ripple Labs is not an  
18   exogenous factor."

19                   Can you define what an exogenous  
20   factor is in your field?

21           A           An exogenous factor -- two factors  
22   are exogenous to one another if movement in one



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1 does not cause movement in the other.

2 MR. OPPENHEIMER: Let's go off the  
3 record for a second. I think we're having issues  
4 with the realtime.

5 THE VIDEOGRAPHER: We are going off  
6 the record at 1:32 p.m.

7 (Pause in the proceedings.)

8 THE VIDEOGRAPHER: We are back on the  
9 record at 1:34 p.m.

10 BY MR. OPPENHEIMER:

11 Q Is it your understanding, Dr. Ammous,  
12 that Professor Ferrell was describing Ripple Labs  
13 as an exogenous factor in his report?

14 A Yes.

15 Q Can you point me to where in  
16 Professor Ferrell's report, Exhibit 149, he makes  
17 that claim?

18 A Paragraph 27, in the bullet point at  
19 the end of the paragraph, he says: "Variation in  
20 the long run XRP price return can be explained by  
21 endogenous cryptocurrency market factors that are  
22 outside of Ripple's control."

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1 Q Oh, just so the record is clear,  
2 you're looking at the heading little -- little  
3 "i"; is that right?

4 A Well, there's the bullet point before  
5 it and the header, yeah, same thing.

6 Q Okay. Now, in paragraph 58 of your  
7 report, the third sentence we were just looking  
8 at, you state that: "Ripple Labs is not an  
9 exogenous factor that can be assessed  
10 independently of the movements of the market  
11 because the company is reacting to those  
12 movements."

13 Are you offering an opinion that it's  
14 impossible to run a valid empirical asset pricing  
15 model whenever the company being studied reacts  
16 to broader market movements?

17 A No. I'm specifically referring to  
18 this example here.

19 Q Is there any way you can distinguish  
20 your criticism of this example from any other  
21 asset pricing model where the company being  
22 studied reacts to broader market movements?

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1           A           I think the distinction would be in  
2     the example of a company that is not buying and  
3     selling its own stock, so therefore its reaction  
4     to the market is constrained to its managerial  
5     decisions in terms of running the market, rather  
6     than intervening in the market by selling and  
7     buying stocks as a response to daily market  
8     movement. And herein lies the important  
9     distinction.

10          Q           So if a company maintains treasury  
11     stock that it sells from time to time or if it  
12     engages in stock buybacks, then your view would  
13     be that you can't run an asset pricing model on  
14     that company?

15          A           I'd have to see more about the  
16     details of the scale of the operation, but I  
17     would lean toward this conclusion.

18          Q           What about in the commodity space?

19                    Suppose a company, let's say,  
20     produces oil and is aware of market factors in  
21     the oil market, would it be your view that you  
22     can't run a valid empirical asset pricing model

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1 on whether that company -- whether that company's  
2 actions affect the price of oil?

3 A It's difficult to answer a question  
4 from this perspective. I'd have to look at the  
5 data on it, and I'd have to see the size of the  
6 company, I'd have to see the size of their  
7 operations.

8 Q What data would you need to look at?

9 A I'd need to analyze, I would say, the  
10 logic of it. So the onus would be on somebody  
11 trying to make the case for why this company does  
12 not affect the oil market to present compelling  
13 evidence for why it is possible to disentangle  
14 broader oil market movements from the actions of  
15 the company.

16 Q And what -- what data or logic would  
17 you need to see in order to consider someone to  
18 have carried their burden of proving that to you?

19 A As is the case with this case, I'd  
20 require to see compelling evidence that the  
21 purchase and sales decisions carried out by the  
22 company in the market in which it is active are

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1 driven by considerations substantially different  
2 from market movements.

3 And it's difficult for me to specify  
4 these things right now because I was not hired to  
5 look at the oil market. I'd have to -- I'd have  
6 to study this as an independent question.

7 Q What would you consider compelling  
8 evidence that the purchase and sale decisions are  
9 driven by considerations substantially different  
10 from market movements in the XRP market?

11 A I'd -- I mean I would say that it is  
12 very difficult in this market to find any way in  
13 which you could disentangle the causality between  
14 the market and the decisions of Ripple Labs since  
15 all that Ripple Labs does is react to the market  
16 as we saw.

17 So what would constitute something  
18 like this would be a set sales schedule that they  
19 announce and they stick to credibly saying, We  
20 are going to be selling this many XRP per day,  
21 regardless of what happens to price, regardless  
22 of what happens to market volume, we're going to

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1 be selling a hundred a day or a million a day,  
2 whatever.

3 Q Take a look at paragraph 49 of your  
4 report.

5 A Although I would say that even that  
6 itself in the case of XRP and Ripple, that  
7 doesn't necessarily go all the way toward  
8 satisfying this. This would be an initial step  
9 that I would consider, but I don't think it goes  
10 all the way because ultimately they are -- even  
11 if they stick to it, they are choosing to stick  
12 to it. And so that's a daily decision that they  
13 do every day.

14 Q So even if Ripple had announced in  
15 advance a precise schedule on what it -- when it  
16 was going to sell and how much and then followed  
17 that schedule, you wouldn't consider that  
18 sufficient to show that it wasn't reacting to  
19 market prices.

20 A Not necessarily, because I don't  
21 think there's a credible commitment to it, as is  
22 the case with Bitcoin where we know there's

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1 nobody who can change the supply schedule. So  
2 it's a distinction wherein with Bitcoin nobody  
3 can change it, and so we know every 10 minutes  
4 we're going to get a new block, and depending on  
5 what four-year period we are in, each new block  
6 is going to contain a set number of new Bitcoins.  
7 We know that is the case because nobody is able  
8 to change it with Bitcoin. But I think in the  
9 case of Ripple, it's highly plausible that  
10 somebody could change it, so therefore sticking  
11 to the schedule would still be -- could still be  
12 viewed as reacting to the market.

13 Q So let me direct you to paragraph 49  
14 of your report now.

15 A Yes.

16 Q In this paragraph -- let's see -- in  
17 the second to last sentence, you write: "In  
18 fact, there is significant correlation between  
19 the returns of individual stocks and the stock  
20 market as a whole. The correlation between  
21 stocks in the same market segment is even  
22 greater, but this, of course, does not mean that

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1 the efforts of individual companies do not impact  
2 the price of their stock."

3 Do you see that?

4 A Yes.

5 Q Are you asserting here that returns  
6 on individual stocks have no statistically  
7 significant alpha when compared to the stock  
8 market as a whole?

9 A No.

10 Q If you had wanted to, you could have  
11 run Professor Ferrell's factor model using the  
12 stock market as an independent variable and the  
13 XRP price as a dependent variable, couldn't you?

14 A Yes.

15 Q You didn't do that, though, did you?

16 A No.

17 Q Why not?

18 A Because I wasn't asked to look at  
19 whether it is the stock market that is driving  
20 returns in XRP. I was asked to offer my opinion  
21 on Professor Ferrell's work, not to provide my  
22 own.



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1           Q       Sitting here today, you can't  
2   identify a single stock that has zero alpha after  
3   controlling for the broader stock market  
4   movement, can you?

5           A       I have not performed this analysis in  
6   order to be able to tell you what the result of  
7   this analysis would be. If you want me to do  
8   it -- I mean I could do it as an exercise and I  
9   could find stocks, but I haven't done this.

10          Q       Right, you haven't done it.

11                   All right. So let's turn to  
12   paragraph 60 of your report.

13                   In paragraph 60, in the last sentence  
14   you write: "If one were to test whether Ripple  
15   Labs has a controlling influence on XRP, it seems  
16   more appropriate to test Ripple Labs' sales  
17   against Ripple Labs' bottom line."

18                   First, do you understand Professor  
19   Ferrell to be testing whether Ripple Labs has a  
20   controlling influence on XRP?

21          A       He's testing whether they are the --  
22   they affect long-term price performance and

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1 returns and short term.

2 Q And that's -- sorry.

3 A He's looking at whether their actions  
4 affect returns on XRP.

5 Q And that's different from whether  
6 they have a controlling influence on XRP, right?

7 A Distinct but similar.

8 Q What does it mean to test Ripple  
9 Labs' sales against Ripple Labs' bottom line?

10 A To see if their sales of Ripple -- or  
11 if their sales of XRP are correlating with  
12 success for the company, for financial success  
13 for the company.

14 Q How would you define "financial  
15 success"?

16 A Profitability.

17 Q So in your view, if Ripple Labs sold  
18 XRP for a gain, that would show that Ripple Labs  
19 has a controlling influence on XRP?

20 A I wouldn't say it would prove it, but  
21 it would suggest that -- it's -- it's a better  
22 indicator of their effort -- their profitability

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1 is a better indicator of their effort than  
2 whatever happens to the price, because they are  
3 not primarily out there to influence the price in  
4 a particular direction.

5 This is the point that I'm trying to  
6 make, that his specification -- even ignoring the  
7 problem of endogeneity and exogeneity, his  
8 specification is effectively saying we need to  
9 see that Ripple Labs' sales are resulting in a --  
10 resulting in a statistically significant  
11 performance of XRP, the asset, in order to find a  
12 link between their actions and the price.

13 But that misses the point that, as  
14 I'm saying here, they are a conscious actor, and  
15 they're not out there to leave a mark on the  
16 price. They're not trying to perform their sales  
17 with the intent purpose of causing a specific  
18 change in the price that will show up in  
19 Professor Ferrell's report.

20 On the contrary, they're doing the  
21 opposite, consciously. They're trying to avoid  
22 being effective. They're trying to minimize

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1     their sales as much as possible in order so that  
2     they can sell as much as they can so that they  
3     can increase their profitability, which is their  
4     fiduciary duty.

5           Q       So let me take that one piece at a  
6     time.

7                   Your testimony is that Ripple Labs  
8     was trying to avoid affecting the price through  
9     its actions; is that right?

10                  MR. ELKHUNOVICH:  Objection.  Form.

11                  THE WITNESS:  That's not my testimony.  
12     That is the evidence that we see from the internal  
13     communications that members of Ripple Labs had  
14     with one another.

15     BY MR. OPPENHEIMER:

16           Q       Okay.  So as you see it, the  
17     underlying facts here are that Ripple Labs was  
18     trying to avoid affecting the price of XRP  
19     through its actions; is that right?

20           A       It definitely seems to be that way  
21     from the discussion I've seen.

22           Q       And you don't have any separate

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1 analysis to determine one way or the other  
2 whether Ripple succeeded in trying to avoid  
3 affecting the price of XRP, do you?

4 A No. I mean, I did analyze the  
5 e-mails and I looked at the data myself, but I  
6 don't present econometric analysis in my report.

7 Q Now, do you understand Professor  
8 Ferrell's report to be investigating the question  
9 of whether there is any link between the price of  
10 XRP and Ripple's actions?

11 A He's investigating whether the main  
12 driver of these actions are the movements in the  
13 cryptocurrency market versus the actions of  
14 Ripple.

15 Q Let's say there is a person who owns  
16 ten XRP --

17 A Mm-hmm.

18 Q -- and they sell their ten XRP for  
19 more than they bought it for. They turn a  
20 profit. That sale has a positive effect on that  
21 person's bottom line, right?

22 A Yes.

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1           Q           Would it be your opinion that that  
2   hypothetical person who sold ten XRP has a  
3   controlling influence on XRP?

4           A           No.

5           Q           What leads you to the conclusion that  
6   Ripple has a controlling influence on XRP by  
7   virtue of profiting off XRP sales when that  
8   hypothetical holder of ten XRP doesn't?

9           A           The difference is the holder of ten  
10   XRP has ten XRP, whereas Ripple Labs has 100  
11   billion -- or had 100 billion, which is all of  
12   the XRPs. So that's a pretty huge difference.

13                   Ripple Labs has them all, and it  
14   functions as a company with a fiduciary duty to  
15   its shareholders. So their ability to control  
16   the supply of XRP and manage it in a way that  
17   turns a profit is -- suggests that they are  
18   exerting a controlling influence.

19                   I wouldn't say that it proves it, but  
20   I would say that it is -- it could be disproven  
21   if you come up with the opposite result. In  
22   other words, if you see that they're -- they are

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1 turning a loss from their management of the XRP  
2 stash, that would suggest they don't have a  
3 controlling influence on XRP or that this is not  
4 what they are trying to achieve from it, that  
5 they're trying to achieve maybe perhaps something  
6 else.

7 Q What if Ripple Labs owned 10 billion  
8 XRP. If that were the case, then would you still  
9 look at the correlation between Ripple's sales  
10 and its bottom line to determine whether it has a  
11 controlling influence?

12 MR. ELKHUNOVICH: Objection. Form.

13 THE WITNESS: I'd have to consider  
14 that question independently and thoroughly. I  
15 can't answer it offhand like that.

16 BY MR. OPPENHEIMER:

17 Q So you can say offhand that because  
18 Ripple Labs initially owned something like 80  
19 billion XRP, that testing its sales against its  
20 bottom line does allow you to determine whether  
21 Ripple has a controlling influence, and you --  
22 withdrawn.

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1           A           It doesn't allow me --

2           Q           Withdrawn. No question yet.

3                   I think what you said is that it's  
4   appropriate to test Ripple Labs' sales against  
5   Ripple Labs' bottom line to determine whether  
6   Ripple has a controlling influence on XRP given  
7   that Ripple initially owned something like 80  
8   billion XRP, and you said that that doesn't work  
9   for somebody who owned 10 XRP.

10                   Sitting here today, are you able to  
11   tell me what the line is in the middle as to when  
12   someone owns enough XRP that this is the  
13   appropriate test for them?

14           A           No, I don't think it's easy to  
15   specify a particular line in the middle. I would  
16   say that's easy to decide on the extreme cases.  
17   So if you own 80 percent of the supply, 70  
18   percent of the supply, 60 percent of the supply,  
19   then that's clearly -- I think makes it very  
20   telling what is happening.

21                   In other words, if you own that, then  
22   we can look at your profitability, and if you're



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1 not being profitable, then maybe you don't run  
2 this thing if you're unable to turn a profit, or  
3 at least the entity itself is not in charge of  
4 this thing.

5                   It's -- it's possible for an oil  
6 company to lose money in oil. It's possible for  
7 a gold mine to lose money while mining gold. And  
8 in this situation, if you're losing money  
9 managing this commodity, then that would suggest  
10 that you are not the one in charge of it.

11           Q       You don't cite any academic  
12 authorities supporting the proposed use of this  
13 test you've set out in paragraph 60, do you?

14           A       No. And it's not -- it's not really  
15 a test that I'm -- that I think is going to be  
16 necessarily decisive in answering this question.

17           Q       Well, what you wrote is: "It seems  
18 more appropriate to test Ripple Labs' sales  
19 against Ripple Labs' bottom line this way."

20                   Are you saying now that that may not  
21 be the appropriate test?

22           A       I'm saying it might not be

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1 conclusive.

2 Q Okay. In paragraph 61, the first  
3 sentence you write: "There is no reason to  
4 suppose that Ripple Labs' control over the market  
5 will necessarily return" -- sorry -- "result in  
6 returns statistically different from zero."

7 What market are you suggesting that  
8 Ripple has control over in this sentence?

9 A XRP.

10 Q Are you offering an opinion that  
11 Ripple has control over the broader  
12 cryptocurrency market?

13 A No.

14 Q All right. Let me direct your  
15 attention now to paragraph 29 of your report.

16 Now, in the first sentence you write:  
17 "Professor Ferrell did not measure short-term  
18 price impact, nor did he measure XRP supply  
19 inflation."

20 We talked about short-term price  
21 impact earlier. I want to ask you about XRP  
22 supply inflation now.

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1 A Mm-hmm.

2 Q What do you mean by "XRP supply  
3 inflation"?

4 A The increase in the supply of XRP  
5 that is in circulation.

6 Q So there's a distinction you  
7 understand between the amount of XRP in  
8 circulation and the amount of XRP that exists.  
9 Is that right?

10 A Yes.

11 Q The amount of XRP that exists, I  
12 think you refer to in your report as total  
13 supply; is that right?

14 A I think so.

15 Q Isn't it true that -- well,  
16 withdrawn.

17 So in this first sentence of  
18 paragraph 29, are you saying that Professor  
19 Ferrell did not measure inflation in the  
20 circulating supply of XRP?

21 A Yes.

22 Q Dr. Ammous, isn't it true that

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1 Professor Ferrell did measure the change in  
2 circulating supply of XRP?

3 A I don't think so.

4 Q Let me turn you to Professor  
5 Ferrell's report. That's Exhibit 149. And I'll  
6 direct your attention to paragraph 49 of the  
7 report.

8 And the third sentence, Professor  
9 Ferrell writes: "A widely used website coin  
10 market cap also reports circulating supply for  
11 XRP," parentheses, "and many other  
12 cryptocurrencies." And then he writes:  
13 "Exhibit 11 shows XRP circulating supply and the  
14 total XRP distributions."

15 Do you see that?

16 A Yes.

17 Q And if you turn to Exhibit 11 of the  
18 report --

19 A Yeah.

20 Q -- you see that there is a graph of  
21 the XRP total distributions and circulating  
22 supply over time, right?

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1 A Yes.

2 Q And this chart is tracking the  
3 monthly change in XRP circulating supply,  
4 correct?

5 A No. This is tracking the circulating  
6 supply, not the change. That's what I'm  
7 referring to in my sentence. I'm saying XRP  
8 supply inflation, which would be the rate --  
9 which would be the rate of change.

10 Q You can determine the rate of change  
11 by seeing how much the supply increases at any  
12 time, right?

13 A Yes. You would have to measure it.

14 Q And that's reflected on this graph in  
15 Exhibit 11, isn't it?

16 A No, it's not.

17 Q So you're saying, as you understand  
18 it, Exhibit 11 of the Ferrell report does not  
19 show increases in the circulating supply of XRP.

20 A No. That's not what you asked.

21 Q Okay. Let's start with -- with the  
22 easy part then.

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1 Can we agree that Exhibit 11 of  
2 Professor Ferrell's report is showing the  
3 increases in the circulating supply of XRP?

4 A It's showing the circulating supply.

5 Q And it's showing that circulating  
6 supply increasing over time, right?

7 A Yes.

8 Q And the data in Professor Ferrell's  
9 workpapers shows the specific numbers by which  
10 XRP increased over time in order to make this  
11 graph, right?

12 A Yes.

13 Q So it's inaccurate to say that  
14 Professor Ferrell did not measure XRP supply  
15 inflation, isn't it?

16 A No, it is not inaccurate. It is  
17 accurate, because what we see here is the supply.  
18 What I'm referring to is the supply growth rate.  
19 Those are distinct metrics, and you have to  
20 measure that one from this one.

21 So you would look at it and you would  
22 see that during this month the supply went up by,

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1 say, 0.1 percent, for that month it went up by  
2 0.3 percent, for this month it went up by 5  
3 percent, and then you would plot it for each  
4 month. That's a distinct metric from this. It  
5 is the slope of this, but you have to measure the  
6 slope.

7 Q And your testimony is that Professor  
8 Ferrell didn't do that.

9 A He does not provide it in the report.  
10 If he does, please point me to it, but I do not  
11 recall him mentioning supply growth rate.

12 Q Okay. Now, let's turn back to your  
13 report, Exhibit 174, and I'd like to direct you  
14 to paragraph 67.

15 In this paragraph, you write:  
16 "Professor Ferrell conveniently ignores Ripple  
17 Labs' XRP buybacks altogether, both in Ripple  
18 Labs' programmatic sales and as part of Ripple  
19 Labs' ODL scheme."

20 Do you see that?

21 A Yes.

22 Q You are stating here that Professor

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1 Ferrell failed to measure XRP buybacks, right?

2 A No.

3 Q Well, is it fair to say that your  
4 critique is that Professor Ferrell only counted  
5 XRP sales but not its buybacks of XRP?

6 A No.

7 Q What are you intending to critique  
8 about Professor Ferrell's analysis through this  
9 sentence that we just read?

10 A The mere existence of these buybacks  
11 illustrates that Ripple Labs is reacting to the  
12 prices on the market, which invalidates the  
13 endogeneity requirement for his analysis. That's  
14 what I'm trying to get at.

15 Q And what you say is that he  
16 conveniently ignores the buybacks altogether.  
17 Right?

18 A Yes.

19 Q Isn't it true that Professor  
20 Ferrell's analysis measured Ripple's net outflows  
21 of XRP and took account of its buybacks in that  
22 measurement?



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1           A           Off the top of my head, I don't  
2   remember right now. Could you point me to the  
3   place where this is mentioned in his report?

4           Q           Sure. Why don't you -- why don't we  
5   start with the Ferrell report, Exhibit 149, at  
6   paragraph 48.

7                       And in this paragraph he says:  
8   "Exhibits 9 and 10 show monthly distributions  
9   that is the monthly XRP outflows net of any  
10  potential inflows to Ripple."

11          A           Yes.

12          Q           Do you see that?

13          A           Yes.

14          Q           You understand that net outflows  
15  means the amount of XRP distributed after  
16  subtracting any amounts that Ripple bought back,  
17  right?

18          A           Yes.

19          Q           So Professor Ferrell did take XRP  
20  buybacks into account in his analysis, correct?

21          A           In his data, but he does not take it  
22  into account in the endogeneity of the factor.

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1 Q Okay. I'd like to turn to  
2 paragraph 62 of your report, Exhibit 174. This  
3 is in the section where you discuss ODL.

4 Are you offering an opinion as to  
5 whether ODL can, as a theoretical matter, work  
6 effectively?

7 A No, I'm not.

8 Q Can you describe what your opinion as  
9 to ODL is?

10 A My opinion of ODL is that in order  
11 for it to work, it requires active management of  
12 the market for XRP by Ripple Labs.

13 Q Can you explain how ODL works as you  
14 understand it?

15 A I mean, I'd prefer to read from a  
16 place because it's a highly technical thing.  
17 It's not something that I could explain very  
18 briefly. It's a -- it's an extremely complicated  
19 process. I could give a very brief overview of  
20 how it intuitively works.

21 Q Why don't we start with that.

22 A Effectively, it allows two

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1 financial -- two individuals who want to send  
2 money to one another to do it using XRP as the  
3 back end for it. So that would work through the  
4 creation of a market in XRP and the sender's  
5 currency where the sender buys -- or not the  
6 sender -- the sender, the financial institution,  
7 takes his money.

8                   So let's say the sender is going to  
9 send dollars. The recipient is going to get  
10 Mexican pesos. The sender's financial  
11 institution would take the dollars from the  
12 sender, use them to buy XRP, send XRP to the  
13 financial institution on the other end, which is  
14 going to sell it in order to procure pesos and  
15 give to the recipient.

16                   That's a kind of very broad outline.

17           Q           Now, in your report in paragraph 64,  
18 you write in the first sentence: "To deploy this  
19 technology for transfer of other currencies, ODL  
20 partners would need to hold a balance of XRP at  
21 all its branches, which involves a cost and  
22 carries foreign exchange risk."

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1 Do you see that?

2 A Yes.

3 Q Isn't it true that ODL can be set up  
4 such that the participating institution only  
5 needs to have an account at the sending digital  
6 asset exchange?

7 A I'm sorry, could you repeat the  
8 question?

9 Q Isn't it true that ODL could be set  
10 up such that the participating institution only  
11 needs to have an account at the sending digital  
12 asset exchange?

13 A What do you mean sending digital  
14 asset exchange? What --

15 Q The digital asset exchange in the  
16 sending currency.

17 A I think from what I understood, the  
18 recipient financial institution also needs an  
19 account to be able to trade their XRP for the  
20 recipient's currency.

21 Q And is it your understanding that ODL  
22 participants have to maintain an inventory of XRP

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1 in order to use ODL?

2 A As a participant -- the financial  
3 institutions you mean or the individuals?

4 Q The participating financial  
5 institutions.

6 A Yes, either they're going to keep it  
7 on hand or they're going to have an account with  
8 a cryptocurrency exchange. Or some other  
9 financial institution that provides them an  
10 account in XRP.

11 Q So my question is, is it your  
12 understanding that institutions participating in  
13 XRP -- in ODL have to maintain an inventory of  
14 XRP in order to use it?

15 A No. They don't have to maintain an  
16 inventory themselves. They could have it in  
17 other financial institutions.

18 Q And are you aware that contracts for  
19 ODL participating institutions provide guarantees  
20 against slippage risk for the ODL process?

21 A I think I've come across that fact  
22 while reading about ODL. I'm not entirely sure,

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1     though. I'd have to review my notes -- I mean  
2     review the ODL FAQ document.

3           Q       If the participating institutions  
4     have an anti-slippage guarantee, then they  
5     wouldn't be exposed to currency risk from holding  
6     XRP, would they?

7           A       It depends on how good the guarantee  
8     is.

9           Q       And if the guarantee is good, they  
10    wouldn't have that risk, would they?

11          A       Well, they wouldn't have it, but  
12    whoever is making the guarantee would have it.  
13    You can't just wish the risk away. Someone's  
14    going to be taking it.

15          Q       I'd like to direct you now a little  
16    later in the ODL section to paragraph 69 of your  
17    report.

18          A       Mm-hmm.

19          Q       In paragraph 69, you write: "The  
20    introduction of XRP as a trading currency is  
21    another significant obstacle to the success of  
22    the Ripple Labs payment technology."

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1 Do you see that?

2 A Yes.

3 Q By "payment technology," are you  
4 referring to ODL?

5 A Yes. ODL or any other kind of system  
6 wherein XRP is not held for its own sake as an  
7 asset, but used in order to facilitate payments  
8 with other currencies.

9 Q So you then state: "Individuals or  
10 institutions looking to adopt the system have no  
11 possible way of calculating the cost of the  
12 transactions given that the cost is denominated  
13 in a currency that fluctuates in value."

14 Do you see that?

15 A Mm-hmm.

16 Q When you say "adopt the system," are  
17 you referring to using ODL?

18 A Or any similar system that operates  
19 on the same principle.

20 Q And at the end of that sentence, you  
21 say: "... is denominated in a currency that  
22 fluctuates in value."

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1                   Is the currency that fluctuates in  
2   value a reference to XRP?

3           A       Mm-hmm.

4           Q       Are there any currencies that don't  
5   fluctuate in value?

6           A       If you're carrying out the  
7   transaction in your own currency, then, yeah,  
8   your currency doesn't fluctuate in value compared  
9   to your currency.

10                   Or specifically, I should say the  
11   transaction fee in dollars does not oscillate  
12   based on the value of the dollar in your bank  
13   account. So when you send the wire transfer and  
14   you pay 25 bucks, it's 25 bucks. It's not  
15   denominated in a currency that's going to  
16   oscillate.

17           Q       And let's say you're sending from  
18   U.S. dollars to Mexican pesos --

19           A       Mm-hmm.

20           Q       -- and the fee is \$25. If you care  
21   about how much that is in pesos because you want  
22   to have pesos in the end, that 25 U.S. dollars



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1 oscillate compared to pesos, right?

2 A Yes.

3 Q Your own website allows people to pay  
4 for books using Bitcoin, right?

5 A Yes.

6 Q Bitcoin also fluctuates in value,  
7 right?

8 A Yes.

9 Q Is it your view that people who are  
10 buying your books have no possible way of  
11 calculating the cost of those books if their base  
12 currency is U.S. dollars?

13 A No.

14 Q Why is it then that you say people  
15 who are using ODL have no possible way of  
16 calculating the cost of those transactions if  
17 they pay a fee in XRP?

18 A Because the ODL transaction is a  
19 dollar transaction. You're sending dollars in  
20 that transaction. And then the fee is quoted in  
21 XRP, and the value of XRP is fluctuating. So the  
22 distinction here is that the fluctuation is in

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1 the value of the currency in which you're  
2 carrying out the transfer.

3 That's why this model doesn't work  
4 for XRP, in my opinion, or for Bitcoin. And many  
5 people have tried to do this with Bitcoin. So  
6 you can still sell things for Bitcoin, as I do on  
7 my website, but I would not run a money transfer  
8 service that relied on paying transaction fees in  
9 Bitcoin.

10 Q So, in your view, having a money  
11 transfer service that charges a fee in a  
12 different currency than the base currency makes  
13 it impossible to calculate the cost of those  
14 transactions. Is that right?

15 A No. It's not necessarily that way.  
16 It's that the -- the volatility of the currency  
17 makes it so that the entire operation of the  
18 system becomes unpredictable, and it creates a  
19 new level of variability in the fees that are  
20 being paid, which is that the currency itself is  
21 fluctuating.

22 Now, on the one hand, this is a

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1 problem because the currency is fluctuating, but  
2 on the bigger hand -- or on the other hand, the  
3 bigger problem is that this is creating a  
4 headache for the market makers on both ends, and  
5 the only way to solve that is for somebody to  
6 step in and essentially subsidize the entire  
7 process, which is the case with what XRP is  
8 doing.

9 Q Well, what you wrote in paragraph 69  
10 was: "Individuals or institutions looking to  
11 adopt the system have no possible way of  
12 calculating the cost of the transactions given  
13 that the cost is denominated in a currency that  
14 fluctuates in value."

15 Is it or is it not possible for ODL  
16 users to calculate the cost of their  
17 transactions?

18 A Well, I guess it would -- it depends  
19 on about if you're talking about it prospectively  
20 or retroactivity. So it's possible to calculate  
21 it retroactivity. After you've paid it, you can  
22 see that, yeah, I paid 3 XRPs, which translates

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1 to \$5, and so therefore I paid five bucks.

2 But there's no way to tell ahead of  
3 time that tomorrow I'm going to be able to send  
4 the money for five bucks because you might need  
5 -- 3 XRP might be worth five bucks or could be  
6 worth 50 cents or could be worth more.

7 Q So it is possible to calculate the  
8 cost of transactions as or after they've  
9 occurred.

10 A Yes.

11 Q Are ODL fees paid in XRP?

12 A It depends on which fees you're  
13 referring to.

14 Q Are there any fees in the ODL process  
15 that are paid in XRP?

16 A I presume there are. Again, I'm --  
17 I -- I haven't ever run ODL, and I'm no expert on  
18 design, but I presume it entails an XRP  
19 transaction, and therefore that's going to  
20 require payment of an XRP transaction fee, which  
21 is in -- which is paid with XRP.

22 Q And who do you presume that XRP

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1 transaction fee is paid to?

2 A It's the network. The validators, I  
3 think the nodes in the XRP network.

4 Q So in your view in order to run an  
5 ODL transaction, the institution participating in  
6 ODL has to pay a fee in XRP to the validators  
7 running the XRP Ledger; is that right?

8 A I'm -- I'm not a hundred percent  
9 confident of it because I haven't looked at the  
10 details, and I don't have them in front of me  
11 right now. But I would lean toward that, yeah.

12 Q Did you make an effort to figure that  
13 out before offering an opinion about how the fees  
14 in ODL transactions are calculated?

15 A Yes, I read the report by Professor  
16 Ferrell, and I read the FAQs on ODL.

17 Q But after reading those and sitting  
18 here today, you're not a hundred percent  
19 confident of whether the participating  
20 institution has to pay a fee in XRP to validators  
21 on the Ledger?

22 A Yeah, I -- I -- if you have the

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1 document, I could refresh my memory, but I'm not  
2 a hundred percent confident of whether that is  
3 the case or not.

4                   Because -- I mean, the -- it's  
5 important here to remember one thing, which is  
6 that ODL has always -- has never really launched  
7 commercially in a sustainable manner where it was  
8 operating fully functional on the market. So  
9 it's difficult to say what -- what its final form  
10 would look like. It's operated in trials that  
11 have been subsidized by XRP, so they may have  
12 made it so that you don't have to pay a  
13 transaction fee to the network in order to make  
14 it easier and simpler for them. Maybe, maybe  
15 not.

16           Q           How do you know whether ODL has  
17 operated in a fully functional manner?

18           A           Because the only examples I've ever  
19 heard of the implementation of ODL have all come  
20 from situations where their use has been heavily  
21 funded by Ripple Labs, and with financial  
22 institutions that were heavily involved with

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1 Ripple Labs as well.

2 So MoneyGram had taken on investment  
3 I think from Ripple Labs, and so it was always  
4 subsidized. It was always a trial. It was  
5 always a pilot program. It's never quite cut it  
6 in the open. And I think for very good reasons.

7 Q What effort did you make to find out  
8 whether ODL has ever emerged out of the trial  
9 phase?

10 A Well, I looked at Professor Ferrell's  
11 report, and since he was trying to make the case  
12 for ODL, I considered that to be a good steel man  
13 of the case for why ODL would have succeeded, and  
14 all that he could present was the example of  
15 MoneyGram, which I find highly unconvincing.

16 Q Do you know when MoneyGram was using  
17 ODL?

18 A I would have to look it up.

19 Q I'll represent to you that it was  
20 mostly in 2019.

21 A Mm-hmm.

22 Q You don't have to take my word for

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1 it, but I'll represent that to you.

2 Have you done any work to figure out  
3 whether the ODL product has changed in any way  
4 since 2019?

5 A It's -- from what I could tell, it's  
6 changed in that it's -- they stopped -- that  
7 they've stopped the trial I think at MoneyGram,  
8 and I don't think they are doing it anywhere else  
9 anymore --

10 Q Okay.

11 A -- as far as I could tell, but I'm  
12 not entirely sure.

13 Q All right. Now, we've been looking  
14 at paragraph 69 of your report that gives your  
15 opinion on ODL.

16 A Mm-hmm.

17 Q What methodology did you use to  
18 arrive at this opinion?

19 A I would say the main thing that has  
20 influenced me on this is that this is something  
21 that I have considered myself as a business idea  
22 in a Bitcoin setting as early as 2014, I would



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1 say. That I considered, well, Bitcoin is a fast  
2 and cheap way to send money across the world, so  
3 it seems like it would make sense that you would  
4 be able to do remittances around Bitcoin. And  
5 it's something that I considered working on for a  
6 while, and then I concluded that there is a  
7 serious problem here that makes it unworkable,  
8 even for a currency that is significantly larger  
9 than XRP, that has more liquidity than XRP, and  
10 that is more provably and reliably neutral and  
11 decentralized.

12 The problem is that for transfers  
13 that involve currencies other than Bitcoin, the  
14 transaction fees -- the transaction costs -- the  
15 cost of transacting and selling the native  
16 currency, buying Bitcoin, and then selling  
17 Bitcoin, buying the recipient's currency, that  
18 I've seen up front. I haven't done numbers on  
19 considering doing something like this. I've seen  
20 how it's just not workable.

21 Q So because it wasn't feasible in your  
22 view to use Bitcoin to facilitate international

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1 remittances, you concluded that it wouldn't be  
2 feasible to use XRP to do that either; is that  
3 right?

4 A No. Because I've considered this  
5 with other digital currencies as well. It's not  
6 the issue. The issue is not Bitcoin. The issue  
7 is not XRP in particular.

8 The issue is that if you're doing a  
9 transfer in a currency other than the currencies  
10 of the people holding it, that's what it comes  
11 down to.

12 I think people mistake -- and this is  
13 something that I feature in my work  
14 extensively -- people mistake the cost of  
15 transactions as if it is the cost of sending  
16 information. They think it's the information  
17 that's expensive to send in a sense. But  
18 information is not expensive to send.  
19 Information is very cheap today.

20 The cost of these transactions, money  
21 transfers, Western Union, PayPal, all of those  
22 things, is the creation of liquidity available to

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1 both parties by the intermediary or  
2 intermediaries usually, and adding another  
3 currency is just adding to the cost of creating  
4 the market on both ends, which is ultimately the  
5 cost.

6           So it comes from a misunderstanding  
7 of conflating the cost as being the cost of  
8 sending information. So those little currencies  
9 can bring down the cost of sending information  
10 slightly, but that's an insignificant cost  
11 compared to the economic cost of making markets  
12 on both ends.

13           Q       So because you've thought about  
14 trying to establish an international remittance  
15 system in this way, and realized that using an  
16 additional currency adds cost, you conclude that  
17 it's not feasible to run such a system in XRP or  
18 any other currency; is that right?

19           A       Run a system where you're using a  
20 currency other than the ones that the sender and  
21 recipient are using, yes.

22           Q       Okay. Did you consider facts about

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1 XRP -- or I'm sorry, about ODL before writing  
2 this opinion?

3 A Yes.

4 Q Isn't it true that you actually  
5 formed this opinion before you reviewed any of  
6 the evidence in the case?

7 A I had formed the opinion in general  
8 on this idea that you could use another currency  
9 for transferring other currencies, and then I  
10 reviewed the ODL information for this case.

11 Q I'm going to show you another  
12 document we'll mark as Exhibit 183.

13 (Exhibit No. 183 was marked for  
14 identification.)

15 BY MR. OPPENHEIMER:

16 Q Exhibit 183 is headed "Working Paper  
17 No. 92, August 2016." The title is "Can  
18 cryptocurrencies fulfil the functions of money?"

19 This is a working paper that you  
20 wrote, right?

21 A Yes.

22 Q And this is the paper, or at least a

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1 working draft of it, that I think you mentioned  
2 earlier was omitted from your CV, right?

3 A Yes.

4 Q The pages here aren't numbered, but  
5 if you count along to page 16.

6 A Okay.

7 Q You see that, just to make sure we're  
8 on the same page, this page starts with the  
9 sentence that says: "The third largest currency  
10 by market cap is Ripple."

11 Do you see that?

12 A Yes.

13 Q Okay. I'd like you to look at the  
14 bottom paragraph on this page, and start at the  
15 third sentence that starts with "Bitcoin's  
16 blockchain."

17 A Okay.

18 Q Do you see that?

19 A Yes.

20 Q Take a second to read that from there  
21 to the end of the paragraph, and then I'll ask  
22 you to go back and look again at paragraph 69 of

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1 your report.

2 A (Peruses document.) Mm-hmm.

3 Q Those two paragraphs, at least the  
4 portion of the paragraph starting with "Bitcoin's  
5 blockchain" are essentially identical, aren't  
6 they?

7 A Yes.

8 Q Did you copy paragraph 69 out of your  
9 paper "Can cryptocurrencies fulfil the functions  
10 of money?"

11 A I don't think I copied it. I think I  
12 just -- I -- I paraphrased it.

13 Q Let me ask it this way: Did you copy  
14 and paste it, subject to a couple of minor  
15 tweaks, from this paper?

16 A I think so. It looks like it, yeah.

17 Q ODL didn't exist in August of 2016,  
18 did it?

19 A I don't know, but Ripple definitely  
20 had something similar working on -- they were  
21 already touting Ripple as a mechanism for  
22 interbank transfers.

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1 Q Dr. Ammous, isn't it true that you  
2 formed the opinion expressed in paragraph 69  
3 before ODL even existed?

4 A I don't think -- I don't know exactly  
5 when ODL existed.

6 Q All right. Let me show you another  
7 document we'll mark as Exhibit 184.

8 (Exhibit No. 184 was marked for  
9 identification.)

10 BY MR. OPPENHEIMER:

11 Q Exhibit 184 is a posting about  
12 on-demand liquidity.

13 A Yeah.

14 Q The title is "On-Demand Liquidity  
15 Spans Worldwide," from Ripple, November 2022.

16 If you look at page 2, the second  
17 paragraph, it says: "Introduced in 2018, ODL was  
18 initially built to ease the restrictions  
19 associated with low value, high volume cross-  
20 border payments."

21 Do you have any reason to doubt that  
22 ODL was introduced in 2018?

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1 A No.

2 Q And the working paper --

3 A Mm-hmm.

4 Q -- that we just looked at in  
5 Exhibit 183, that was written in 2016, right?

6 A Yes.

7 Q Okay. Let's --

8 A Although I would say, as I was saying  
9 earlier, the conclusions that I draw are  
10 applicable to earlier iterations of Ripple Labs'  
11 ideas on how to use XRP to facilitate bank  
12 transfers, even before ODL came about, and it  
13 applies to any -- any -- any utilization of  
14 cryptocurrencies for fiat transfers.

15 Q And sitting here today, you don't  
16 know what total volume of currency has passed  
17 through ODL for international transfers, do you?

18 A I think Professor Ferrell mentions  
19 this in his report.

20 Yeah, it says "reaching a high of  
21 \$410 million in April of 2020."

22 Q For the record, can you state where



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1 you're reading from?

2 A Paragraph 72 in Professor Ferrell's  
3 report.

4 Q And do you know if that reference to  
5 a high of 410 million refers to -- up to the  
6 period by November 2020 that Professor Ferrell  
7 was discussing in the previous sentence?

8 A Sorry, could you repeat the question?

9 Q Yeah. You just read a line  
10 mentioning a high of \$410 million in April of  
11 2020.

12 My question to you is, do you know if  
13 that reference to a high is with regard to the  
14 period up through November of 2020 that Professor  
15 Ferrell was discussing in the previous sentence?

16 A Just reading the sentence, it seems  
17 like that is the case, yes.

18 Q In fact, you're aware that billions  
19 of dollars have moved through ODL each quarter in  
20 recent years; isn't that right?

21 A I don't have the data ahead of me  
22 right now. I don't know.

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1           Q       Well, take a look at paragraph 65 of  
2   your report.

3           A       My report?

4           Q       Your report. Exhibit 174 for the  
5   record.

6           A       Mm-hmm. Okay.

7           Q       You mention in the last sentence, for  
8   example, that Ripple had net sales of 536.99  
9   million of XRP in Q3 and Q4 2022.

10                   Do you see that?

11          A       Okay.

12          Q       And you cite an XRP Markets Report as  
13   your source for that one, right?

14          A       Okay.

15          Q       You could have consulted other  
16   publicly available XRP Markets Reports to figure  
17   out how much ODL has -- or how much volume has  
18   passed through ODL since November of 2020,  
19   couldn't you?

20          A       I could have.

21          Q       Right.

22          A       But...

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1 MR. OPPENHEIMER: Let's go off the  
2 record here.

3 THE VIDEOGRAPHER: We're off the  
4 record at 2:35 p.m.

5 (Recess.)

6 THE VIDEOGRAPHER: This marks the  
7 beginning of media number 5. We're on the record  
8 at 2:50 p.m.

9 BY MR. OPPENHEIMER:

10 Q Dr. Ammous, could you please turn to  
11 paragraph 40 of your report.

12 A Mm-hmm.

13 Q In paragraph 40 you write: "The XRP  
14 Ledger is perfectly capable of operating with the  
15 total 100 billion XRP or the currently  
16 circulating approximately 50 billion XRP or 10  
17 billion XRP. There is no need whatsoever for the  
18 supply of XRP to increase in order for it to  
19 operate since any existing supply will suffice to  
20 meet any amount of demand because the value of  
21 the tokens can appreciate to satisfy the needs of  
22 all users for whatever quantity of XRP they

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1     desire."

2                     Do you see that?

3             A        Yes.

4             Q        When you say, "There is no need  
5     whatsoever for the supply of XRP to increase,"  
6     are you referring to the circulating supply, the  
7     total supply, or something else?

8             A        In this situation, it would be the  
9     circulating supply.

10            Q        And when you say, "Any existing  
11     supply will suffice to meet any amount of  
12     demand," what sort of analysis did you do to  
13     reach that conclusion?

14            A        This is a very fundamental point in  
15     economics, something that I have studied  
16     extensively, that I base my book of The Bitcoin  
17     Standard on it, and I -- I quote other economists  
18     who have discussed this.

19                    And I also -- if you look at footnote  
20     18, I show how the size of the Bitcoin economy  
21     has grown enormously, whereas the -- the number  
22     of the Bitcoins in circulation has only grown

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1 very little during the same period.

2 Q To your knowledge, would the XRP  
3 Ledger work if there were only 5 XRP that  
4 existed?

5 A Yeah, if they were visible enough,  
6 you could keep dividing them down into smaller  
7 units, and then it would work with 5 XRP.

8 Q How many wallet addresses could  
9 someone set up if there were only 5 XRP that  
10 existed?

11 A You could set up the wallet addresses  
12 to be denominated and then drops, or you could  
13 make smaller denominations than drops.

14 Q Do you know if doing that would  
15 require changes to the XRP Ledger code?

16 A I presume at a number of around 5  
17 XRPs, then the drops -- then you're going to need  
18 to make more drops or split the drops down to  
19 smaller units.

20 Q Suppose there were only 5 XRP that  
21 existed. On the XRP Ledger code as it exists  
22 today, how many wallet addresses could you make,

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1 if any?

2 A I don't know.

3 Q Sitting here today, can you say with  
4 confidence that a supply of 5 XRP would suffice  
5 for the XRP Ledger to function?

6 A If they're divisible, as I mention in  
7 the example that I use on the drops, ultimately  
8 it's all about the divisibility.

9 Q How many XRP would it take to make a  
10 wallet address for every person in the world, do  
11 you know?

12 A There is no set number because it  
13 depends on the denomination of the XRP. So if  
14 each XRP can be divided into 10 trillion units,  
15 then 1 XRP is more than enough.

16 Q Do you know if there is a minimum  
17 number of XRP that has to be held in order for a  
18 wallet address to get set up?

19 A I do not -- I've never used XRP.

20 Q Okay. And that's not something you  
21 investigated before writing your report in this  
22 case, correct?

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1           A           No, but I do not believe that it is  
2   even relevant because you could change that  
3   requirement as you increase the number of -- as  
4   you increase the number of -- as you increase the  
5   divisibility of the token.

6           Q           I just want to make sure the record  
7   is clear on that one. I asked you if that's  
8   something -- that's not something you  
9   investigated before writing your report, and you  
10   said no.

11                   Is it your testimony that you did not  
12   investigate that question before writing your  
13   report?

14           A           Yes, I did not investigate that  
15   question.

16           Q           Okay, thank you.

17                   Let's turn now to paragraph 47.

18                   At the end of the first sentence in  
19   paragraph 47, what you write is: "The only  
20   rationale remaining for the increase of the  
21   supply is the same rationale governments use for  
22   using inflation to finance their operation."

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1 Do you see that?

2 A Yes.

3 Q So there's another reference to  
4 increase of the supply. Is that again the  
5 circulating supply or the total supply, or  
6 something else?

7 A Circulating. I guess in this context  
8 it would work for both as well, but for  
9 consistency, let's go with circulating.

10 Q What work, if any, did you do to  
11 identify all of the possible rationales for why  
12 Ripple might distribute XRP before reaching this  
13 conclusion?

14 A I've seen a lot of currencies in my  
15 life.

16 Q And that's the entirety of the  
17 analysis that you did?

18 A Of every single currency I've ever  
19 seen, the main purpose for increasing the supply  
20 is to finance and profit -- it's for the profit  
21 of the people who are able to increase the  
22 supply.



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1 Q Did you consider any other possible  
2 justifications for increasing a supply?

3 A I have not come across any.  
4 Professor Ferrell certainly does not mention  
5 another one.

6 Q Do you understand professor --  
7 Professor Ferrell to be offering an opinion about  
8 why Ripple was distributing XRP?

9 A He is offering an opinion on the  
10 distribution of XRP not being the driver of XRP's  
11 price movement.

12 Q And is it your view that he can't  
13 offer that opinion unless he first identifies the  
14 reasons why XRP -- why Ripple was distributing  
15 XRP?

16 A Not necessarily, no.

17 Q Let's go to paragraph 22 of your  
18 report.

19 In paragraph 22 you say: "As Ripple  
20 Labs currently continues to hold approximately  
21 50 billion tokens, around half of the total  
22 supply, selling that entire supply on the market

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1 in a short period of time would devastate XRP's  
2 price. The fact that Ripple Labs has not  
3 undertaken such a step shows that the price of  
4 XRP depends on the actions of Ripple Labs."

5 Do you see that?

6 A Yes.

7 Q Are you offering an opinion that the  
8 fact that someone has declined to take a step  
9 that might significantly affect the price of an  
10 asset means that the price depends on that  
11 person's actions?

12 A I'm not saying that that is the case  
13 always. Me not crossing the street today is not  
14 going to affect the price of copper. So I can't  
15 generalize that.

16 Q Well, my question was about declining  
17 to take a step that might significantly affect  
18 the price of an asset.

19 A Well, it depends on what the step is,  
20 but, yeah, if the step is selling -- doubling the  
21 circulated supply, then yeah, being able to take  
22 that step and not taking that step is affecting

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1 the price.

2 Q Let me give you a hypothetical.

3 As of last month, November 2023, the  
4 investment firm Berkshire Hathaway had more than  
5 \$150 billion in cash available. Suppose  
6 Berkshire Hathaway decided to take that 150  
7 billion and use it all to buy XRP.

8 That would significantly affect the  
9 price of XRP, wouldn't it?

10 A Yes.

11 Q Is it your opinion that the price of  
12 XRP depends on the actions of Berkshire Hathaway?

13 A If they do act with XRP -- if they  
14 have the XRP, if they buy XRP, then yes.

15 Q And does the fact that they refrained  
16 from taking that step mean that the price of XRP  
17 still depends on their actions?

18 A No.

19 Q In paragraph 22, you offer an opinion  
20 that the fact that Ripple Labs has not undertaken  
21 such a step shows that the price of XRP depends  
22 on Ripple's actions.

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1                   How do you distinguish Ripple from  
2     Berkshire Hathaway in that hypothetical?

3           A           Because when Berkshire Hathaway  
4     doesn't buy the Ripple, the XRPs, they are  
5     holding dollars and they're not buying XRPs. So  
6     there's no conceivable effect that they have on  
7     the Ripple market, the XRP market.

8                   On the other hand, in the case of  
9     Ripple Labs, if they don't dump their 50 billion  
10    XRPs, they are holding 50 billion XRPs. They're  
11    not holding U.S. dollar cash. That's the  
12    distinction. That's why they are inescapably a  
13    player on the market, whereas Berkshire Hathaway  
14    is not, because Berkshire Hathaway, if they don't  
15    buy, they're holding dollars.

16          Q           So if Ripple decided to sell all of  
17    its XRP, in your view that would affect the price  
18    of XRP on the market, right?

19          A           Yes.

20          Q           And if Ripple decided not to sell all  
21    of its XRP, in your view, that would also affect  
22    the price of XRP on the market, right?

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1 A Yes.

2 Q Now, in that sentence we were just  
3 looking at in paragraph 22, you say selling the  
4 entire supply on the market would devastate XRP's  
5 price.

6 A Yes.

7 Q You're not claiming that the price  
8 would go all the way to zero, are you?

9 A I'm not necessarily claiming that,  
10 no.

11 Q But -- and I think we talked about  
12 this earlier, but in paragraph 21, you do say:  
13 "The entirety of the economic value of XRP  
14 depends on Ripple Labs."

15 Do you see that?

16 A Yes.

17 Q So if Ripple were to sell all of its  
18 XRP, and the price didn't go to zero, wouldn't  
19 that indicate that there is some economic value  
20 that's not dependent on Ripple?

21 A It's a hypothetical thing. Although  
22 I would also add that it's not just the behavior

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1 of XRP with the -- with the allocation. It's  
2 also their behavior in general in terms of their  
3 ability to maintain the protocol. They could  
4 introduce a bug. They could make an error that  
5 could make the network inoperable and destroy the  
6 value that takes place in it.

7 Q Do you think Ripple has the  
8 unilateral ability to make changes to the XRP  
9 Ledger's code?

10 A I lean towards saying yes.

11 Q What analysis did you do to figure  
12 that out?

13 A I've looked at digital currencies  
14 over the past 10 years, and I think the only  
15 digital currency that has shown that it is  
16 resistant to a central authority being able to  
17 change it is Bitcoin. Because when we've had  
18 people trying to make changes to Bitcoin, what  
19 followed was years and years of acrimony and an  
20 inability to check -- to make changes to the  
21 consensus rules, whereas, we have never heard of  
22 anything like that with Ripple.

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1                   So the Ripple network has reinvented  
2   itself over the years with all kinds of different  
3   rationales and all kinds of different marketing  
4   talking points, and we've never heard of any  
5   contentious problems with making these upgrades,  
6   if you want.

7                   So the -- the dog that doesn't bark  
8   here in this case is if it's not possible for  
9   Ripple Labs to change things, where is all the  
10   acrimony, where is all the contention on who gets  
11   to make the changes, and who can or cannot make  
12   changes.

13               Q       You said in that last answer, "We've  
14   never heard of any contentious problems."

15                   Who is "we"?

16               A       Yeah, that's -- I probably should  
17   have said "I."

18               Q       And what investigation have you done  
19   to seek out whether there were any disagreements  
20   about changes to the XRP Ledger code?

21               A       I've researched Ripple for my first  
22   paper, I followed it -- I follow the news on

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1 Ripple, and I've never come across anybody  
2 mentioning acrimony and deadlock and an inability  
3 to move forward. On the contrary, we always get  
4 the opposite, which is Ripple is nimble, Ripple  
5 can make -- can change and adjust.

6 Q Just to be clear, you said you  
7 researched Ripple for your first paper.

8 Was that the paper that we looked at  
9 earlier in Exhibit 184?

10 A 183.

11 Q Thank you, the paper we looked at in  
12 183.

13 A Yes.

14 Q Okay. You didn't do any additional  
15 research after writing that paper, did you?

16 A I've read about the cryptocurrency  
17 markets regularly since then. I follow the news.

18 Q Okay. Let's look at paragraph 25 of  
19 your report.

20 A Mm-hmm.

21 Q Still discussing what would happen if  
22 Ripple sold all or a substantial portion of its



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1 XRP, what you say in the second sentence here is:

2 "Such a sale would completely destroy the  
3 correlation of XRP with the rest of the digital  
4 asset market."

5 When you say, "It would completely  
6 destroy the correlation," are you referring to  
7 going forward after Ripple had sold all of that  
8 XRP?

9 A Referring particularly to the period  
10 after the sale. So the correlation would be such  
11 that -- let's say Ripple is highly correlated  
12 with the rest of the cryptocurrency market, that  
13 it would explain a significant percentage of the  
14 variation. But then you would expect that to say  
15 if the cryptocurrency market on that day went up  
16 2 percent, you would expect Ripple to move  
17 something in the range of 2 percent, but such a  
18 move would probably make Ripple drop by, I'd say,  
19 80, maybe 90 percent, something like that, in  
20 which case it's going to be completely flying in  
21 the face of the correlation.

22 Q So I just want to make sure I

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1 understand fully.

2 When you say, "It would completely  
3 destroy the correlation," you're talking about on  
4 the day it happens, not before that, not going  
5 forward after that?

6 A Mm-hmm. Definitely on the day it  
7 happens, and the short term after that. But  
8 later on, it might -- it's difficult to predict  
9 how it's going to play out in the long term.

10 Q What testing or analysis have you  
11 done to figure out whether the hypothetical sale  
12 that you've posited would destroy correlation in  
13 the short term following the sale?

14 A I've looked at -- there are several  
15 examples of currencies where this has happened  
16 where the founding team manages to dump a large  
17 amount of tokens on the market, and the price  
18 collapses immediately. You see the price drop by  
19 90 percent, 99 percent, 99.9 percent, something  
20 like that.

21 And I've also looked at the  
22 discussions that the Ripple Labs team had amongst

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1 themselves about the degree of responsiveness of  
2 the market to their sales, and how even tiny  
3 sales were causing prices to decline when they  
4 were basing the volume of their sales on the --  
5 what they later discovered was erroneous data  
6 from coin market gap that overstated the volume.

7               So even small margins affect the  
8 price, I think then that's very good compelling  
9 evidence for that, and there's, of course, very  
10 strong theoretical reasons to believe that this  
11 is the case. That's just the simple logic of  
12 supply and demand, which is the first thing you  
13 learn as an economist or one of the first and  
14 most important things you learn as an economist  
15 is that supply goes up, price goes down.

16           Q       So you mention there that there are  
17 several examples of currency where that happens.  
18 You don't describe any of those examples in your  
19 report, do you?

20           A       I do not, no.

21           Q       Okay. Sitting here today, can you  
22 say what other currencies you have in mind as

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1 those examples?

2 A I know Bitconnect is one. That one  
3 off the top of my head, I remember that situation  
4 happening.

5 I think more recently there was one  
6 called Pepe, I think in which something like this  
7 happened.

8 Q Any others that you can think of as  
9 you sit here today?

10 A Not off the top of my head, no.

11 Q Okay. In that sentence we were just  
12 looking at in paragraph 25, you said, "...  
13 selling all or a substantial portion of Ripple's  
14 XRP."

15 How do you define a "substantial  
16 portion" for this purpose?

17 A Well, I mean, I guess the term  
18 "substantial" here is a little bit of a -- it's  
19 almost tautological in the sense that a  
20 substantial portion is the one that would  
21 completely destroy the correlation. It -- it  
22 would be one that would make Ripple move

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1 drastically differently from the rest of the  
2 market.

3 Q So when you say that: "An analysis  
4 should take into account what would happen if  
5 Ripple Labs were to sell all or a substantial  
6 portion of its XRP," you're saying that  
7 "substantial portion" there means an amount  
8 sufficient to completely destroy the correlation  
9 between XRP and the rest of the market? Is that  
10 right?

11 A Mm-hmm.

12 Q That's a "yes"?

13 A Yes.

14 Q Okay. Dr. Ammous, would you say you  
15 approached your assignment in this case with an  
16 open mind?

17 A Yes.

18 Q Were you open to the possibility that  
19 Professor Ferrell was correct that XRP's price  
20 movements could be explained by factors other  
21 than Ripple's actions?

22 A Yes, certainly.

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1           Q           You had preexisting views about  
2   Ripple and XRP before being retained in this  
3   case, didn't you?

4           A           Yes.

5           Q           And you shared those views publicly,  
6   right?

7           A           Yes.

8           Q           Your own personal view is that Ripple  
9   is a scam, right?

10          A           I've probably said that several  
11   times, yes.

12          Q           Yeah, let's look at some. I'm going  
13   to show you a document we'll mark as Exhibit 185.

14                      (Exhibit No. 185 was marked for  
15                      identification.)

16   BY MR. OPPENHEIMER:

17          Q           Exhibit 185 is a set of tweets from  
18   your account. I'm looking at one dated  
19   November 25th, 2016. This tweet says: "Ripple  
20   is a fucking scam, and only an idiot could  
21   believe it will do anything other than raise  
22   money for the scammers who made it."

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1 Do you see that?

2 A Yes.

3 Q Did that tweet accurately reflect  
4 your views about XRP and Ripple?

5 A Probably around that time, yes.

6 Q When did you first form the belief  
7 that Ripple was a scam?

8 A I would say it was when I studied it  
9 for that paper, "Can cryptocurrencies fulfil the  
10 functions of money?"

11 Q And have you ever changed your mind  
12 as to that belief?

13 A No.

14 Q You state here that "only an idiot  
15 would buy XRP," right?

16 A I do write that there, yeah.

17 Q Is that still your opinion today?

18 A No. I'd say that since then, I --  
19 I've come to accept that that's probably not a  
20 fair assessment.

21 Q Why have you come to the conclusion  
22 that that's probably not a fair assessment?

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1           A           When I analyzed this in 2016, I was  
2    looking at them from the lens of somebody who's  
3    looking at them as digital currencies, and in my  
4    mind, they were all trying to be decentralized  
5    digital currencies like Bitcoin. And so in my  
6    mind, if you were to invest in something like  
7    Ripple, then you'd need to ask yourself about the  
8    decentralization first. And for me, if you  
9    didn't grasp that Bitcoin was decentralized,  
10   whereas Ripple was not, then clearly you didn't  
11   get what was going on.

12                   Where I've changed my mind on this is  
13   that, now later on, I've come to realize that  
14   many people who invested in Ripple didn't do so  
15   based on the idea that this was going to be a  
16   better Bitcoin or a faster Bitcoin or a better  
17   way of doing decentralized currency, but they did  
18   so based on the premise that this is -- this  
19   is -- they thought of it as if it is this new  
20   Uber, this new way that's going to revolutionize  
21   banking the same way that Uber revolutionized  
22   taxis in the sense of a startup investment.



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1                   And so I can see how thinking of it  
2    from that perspective might cloud you from  
3    considering the aspect of decentralization,  
4    whereas from that context, having Ripple Labs in  
5    charge seems like a plus, just like you want to  
6    have Uber's admins -- the Uber leadership in  
7    charge of the company, you want to have this labs  
8    entity in charge of the protocol.

9           Q           And what -- I think you just  
10   attributed that view to people who purchased XRP;  
11   is that right?

12          A           Sorry, your question is not clear.  
13   What exactly do you mean?

14          Q           Well, you just as subscribed -- well,  
15   let's get it this way. Withdrawn.

16                   In your last answer you said, "I've  
17   come to realize that many people who invested in  
18   Ripple didn't do so based on the idea that this  
19   was going to be a better Bitcoin or a faster  
20   Bitcoin ..."

21                   When you say "invested in Ripple," do  
22   you mean bought XRP?

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1 A Yes.

2 Q What did you do to figure out that  
3 that was the viewpoint of people who bought XRP?

4 A Just came across more and more people  
5 who -- who thought of it as an investment in a  
6 startup. I think this is -- this is the thing  
7 that I was unaware of as an idea back then.

8 Q You wrote in paragraph 70 of your  
9 report -- I'll give you a minute to turn there.  
10 Let me know when you're there.

11 A Yes.

12 Q You wrote in paragraph 70 of your  
13 report: "Investors are unlikely to want to store  
14 wealth in a digital asset whose value can be  
15 controlled by the creators controlling a  
16 significant part of the supply."

17 Are you now saying that actually  
18 investors wanted to store wealth in a digital  
19 asset because the creators had an active role?

20 A So within the context of your last  
21 question on this statement, I would say that my  
22 assessment of Ripple investors as idiots has

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1     softened because I can see the rationale for it  
2     as if you're investing in it as a payment  
3     technology, like you're investing in a startup  
4     that does payments technology.

5                     But that is distinct from investing  
6     in XRP as a store of value. And I think this is  
7     the thing where I predict they are likely -- the  
8     network is likely to face the serious headwind,  
9     which is, all right, people might want to buy it  
10    initially as the kind of token that will go up in  
11    value because of its use in payments, but that's  
12    distinct from wanting to hold it as money, as  
13    people hold gold or Bitcoin.

14            Q        So your view is that people might  
15    want to buy XRP because it could be used in  
16    payments, but might not want to hold it long term  
17    because it wouldn't function as money or gold or  
18    Bitcoin. Is that a fair summary?

19                     MR. ELKHUNOVICH: Objection.  
20    Misstates prior testimony.

21                     THE WITNESS: I think it's -- I mean,  
22    I think those are likely to coexist as

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1 motivations, but I do not see the demand for XRP  
2 as a neutral monetary asset.

3 BY MR. OPPENHEIMER:

4 Q You haven't done any formal surveys  
5 to figure out the views of XRP buyers, right?

6 A No.

7 Q You haven't done any informational  
8 interviews with them, right?

9 A No.

10 Q Your belief on what XRP holders  
11 thought about XRP just comes from hearing some of  
12 what they said on the internet; is that right?

13 A No, it also comes from understanding  
14 monetary assets and how monetary assets rise as  
15 monies. And historically, we have two kinds of  
16 currencies: Market commodities or government  
17 currencies.

18 Q You just said that your view on XRP  
19 holders has softened over time. When did it  
20 soften?

21 A I can't point to a particular date,  
22 but I would say my initial reaction which you see

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1 in that tweet was -- was something that I held  
2 more strongly back then.

3 Q Well, that tweet is 2016. That was  
4 still your view in 2017, right?

5 A Probably, yes. Yeah.

6 Q And 2018?

7 A I'd say so.

8 Q And in 2019?

9 A Yeah.

10 Q It was also still your view in 2020,  
11 wasn't it?

12 A I'm a little less certain here. I  
13 don't exactly remember what my views were. I  
14 didn't publish anything in 2020 about Ripple, so  
15 I can't remember exactly what I thought back  
16 then.

17 Q When you say you didn't publish  
18 anything in 2020 about Ripple, are you talking  
19 about academic articles or Twitter or something  
20 else?

21 A Academic articles or books.

22 Q The only academic article you've ever

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1 published about Ripple was the one we looked at  
2 in Exhibit 183, right?

3 A Yes.

4 Q I'm going to mark this exhibit as  
5 186.

6 (Exhibit No. 186 was marked for  
7 identification.)

8 BY MR. OPPENHEIMER:

9 Q Exhibit 186 is another tweet from  
10 your account dated August 24th, 2017. It says:  
11 "Anyone who takes Ripple seriously is not worth  
12 taking seriously."

13 Do you see that?

14 A Yes.

15 Q And did that view soften at some  
16 later date?

17 A Yes.

18 Q But sitting here today, you can't say  
19 exactly when; is that right?

20 A No.

21 Q No, it's not right or, no, you can't  
22 say?

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1           A           I cannot really say. I just think  
2   I've got more empathy to somebody who would have  
3   invested in Ripple today.

4           Q           When you say "invested in Ripple," do  
5   you mean invested in XRP?

6           A           Yes. It's hard for me to tell the  
7   two apart. I keep getting them mixed up.

8           Q           Are you familiar with the term  
9   "Bitcoin maximalist"?

10          A           Yes.

11          Q           What does the term mean to you?

12          A           To me it means somebody who believes  
13   that the -- the only digital asset that matters  
14   is Bitcoin.

15          Q           Are you a Bitcoin maximalist?

16          A           I would say so, yes.

17          Q           Okay. Isn't it true that you want  
18   XRP to fail?

19          A           I'm -- I'm more concerned about  
20   Bitcoin's success. I think with XRP and with  
21   digital -- with other digital currencies, I'm  
22   mostly indifferent at this point. I don't

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1 particularly pay much attention to them, except  
2 when asked to do so in a professional -- in a  
3 professional context like now.

4 Q So before you were engaged to offer  
5 an opinion in this case, you weren't paying much  
6 attention to other cryptocurrencies like XRP; is  
7 that right?

8 A Probably, yes.

9 Q Now, you view Bitcoin as the solution  
10 to problems created by fiat currency, correct?

11 A Yes.

12 Q And in your view, the use of any  
13 non-Bitcoin digital asset diverts people from  
14 that solution, right?

15 A Well, I -- I can see both points in  
16 this regard. I've -- I've argued this at a  
17 certain point that digital -- other digital  
18 currencies detract from Bitcoin because they  
19 distract from Bitcoin. But I -- to be fair, I  
20 think there is -- the opposite effect is also  
21 true.

22 I know many people who got into



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1 Bitcoin because they first heard about some of  
2 the other digital currencies. And the  
3 difference, of course, is that other digital  
4 currencies have marketing teams which do a much  
5 better job of marketing their currencies than  
6 Bitcoin because Bitcoin doesn't have a marketing  
7 team. It doesn't have a central authority. It  
8 doesn't have anybody who can print Bitcoins to  
9 finance a marketing campaign.

10 So a lot of people end up catching  
11 the marketing for the other currencies, which  
12 gets them familiar with the concept of digital  
13 currency, and then gets them to start looking  
14 into Bitcoin more. So overall, I wouldn't be so  
15 sure if I would say that other digital currencies  
16 are net positive or net negative on Bitcoin.

17 Q Well, you previously have called them  
18 negatives, haven't you?

19 A Yes. As I said earlier, I used to  
20 lean to the idea that they are negative, but I  
21 think now I'm more open-minded to the concept  
22 that maybe they are positive.

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1 Q Roughly when would you say you became  
2 more open-minded on that issue?

3 A Difficult to tell, but I might guess  
4 sometime maybe 2019, 2020.

5 Q Okay. Let me show you an exhibit  
6 we're going to mark as Exhibit 187.

7 (Exhibit No. 187 was marked for  
8 identification.)

9 BY MR. OPPENHEIMER:

10 Q Exhibit 187 is another set of tweets  
11 from your account. If you look at the fourth  
12 tweet down on the page, this is dated  
13 September 10th, 2021.

14 And the second sentence here says:  
15 "When you promote stupid shitcoin Ponzi schemes,  
16 you're diverting people away from the solution.  
17 The sooner you get in on Bitcoin, the sooner the  
18 nightmare ends. Everything else is like farting  
19 in the wind."

20 Do you see that?

21 A Yeah.

22 Q Did that accurately state your views

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1 as of September of 2021?

2 A Yeah, I guess.

3 Q Would you say it accurately reflects  
4 your views as of today?

5 A I mean I -- in this particular  
6 context, I'm saying that he's -- if he's  
7 promoting other currencies. So the question of  
8 actually actively promoting other currencies,  
9 yeah, I mean I would lean towards -- if you're  
10 being out there actively promoting the other  
11 currencies. Again, though, promoting the other  
12 currencies does bring attention to Bitcoin. So  
13 I'm -- I don't feel strongly either way. I'm  
14 willing to see the points in both.

15 Q By the way, we've looked at a few of  
16 your tweets so far. I've got a question about  
17 the profile picture that you have. It's hard to  
18 see on that one. So I'll mark this as  
19 Exhibit 188.

20 (Exhibit No. 188 was marked for  
21 identification.)

22 THE WITNESS: Yes.

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1 BY MR. OPPENHEIMER:

2 Q So the front page of Exhibit 188 is  
3 your profile on Twitter. The back page is a  
4 zoomed-in copy of the picture --

5 A Yes.

6 Q -- and your photo.

7 It looks like you have glowing laser  
8 eyes. Can you explain what that indicates?

9 A Yes. Back in 2021, it became a meme  
10 among Bitcoiners that they have laser eyes, and  
11 they started putting laser eyes on their profile  
12 pics. Somebody made me this picture, and I --  
13 they took my profile picture, they added the  
14 laser eyes, and then I uploaded it.

15 Q And there's this third -- is it an  
16 eye?

17 A Yes.

18 Q There's a third eye in your picture.  
19 What's that indicating to you?

20 A Well, the person who did it did it as  
21 a joke. I presume he -- the third eye is  
22 referred to as the eye of wisdom, foresight, I

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1 guess, in a lot of ancient traditions, and so he  
2 gave me an extra eye.

3 Q So this profile picture indicates  
4 that you're a -- a wise Bitcoiner. Is that fair  
5 to say?

6 A I presume that was the intent of the  
7 graphic design job there.

8 Q You said that this meme version was  
9 2021. It's December of 2023 now. Have you --  
10 why have you kept it as your profile picture for  
11 that time?

12 A A lot of people have kept it. It  
13 just became -- it became a part of Bitcoin  
14 internet culture, I guess.

15 Q Okay. Now, I think we saw in  
16 Exhibit 187 you used the term "shitcoin." When  
17 you use that term, you mean anything other than  
18 gold or Bitcoin, right?

19 A Pretty much, yes.

20 Q So in your view XRP is a shitcoin,  
21 correct?

22 A I would say so, yes.

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1 Q And so is the U.S. dollar, right?

2 A Yes.

3 Q The Euro?

4 A Yes.

5 Q Ethereum?

6 A Yes.

7 Q Government bonds?

8 A Yes.

9 Q Diamonds?

10 A Diamonds, I would class as shitcoins.

11 I should clarify here that for things like  
12 diamonds, it's not the good itself that is  
13 necessarily the shitcoin. It's its use as a  
14 store of value. So the idea that I'm going to  
15 buy a diamond ring because that's going to  
16 maintain purchasing powers into the future, I  
17 think of that particular use of diamond as being  
18 a shitcoin.

19 Q Okay. So diamonds aren't a shitcoin  
20 if they're used in industrial drills.

21 A Yes, or if you just buy them because  
22 they look pretty.

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1 Q Okay. You view cryptocurrencies as a  
2 zero-sum game, right?

3 A Mmm. Well, that depends on the  
4 context. In certain ways, yes. In certain ways,  
5 no. I think -- again, this is one of those  
6 things where I would have been a little bit more  
7 leaning towards this conclusion a little bit  
8 earlier, but with time I think I've become a  
9 little bit more open-minded to the alternative  
10 which I mentioned, which is that more  
11 cryptocurrency activity in general leads to more  
12 eyes and attention to Bitcoin.

13 Q Let's get another exhibit marked.  
14 We'll mark it as 189.

15 (Exhibit No. 189 was marked for  
16 identification.)

17 BY MR. OPPENHEIMER:

18 Q Exhibit 189 is another set of tweets  
19 from your account.

20 We'll look at the first one here. In  
21 this one you write: "Cryptocurrencies are a  
22 zero-sum game, and if you're not Bitcoin, you've

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1 already lost. Copying Bitcoin is not innovation;  
2 it's just a new way of running an old scam, money  
3 printing. Actual innovations will be built on  
4 Bitcoin, not by people copying it to print their  
5 own money."

6 Do you see that?

7 A Mm-hmm.

8 Q And then --

9 A Yes.

10 Q -- in the next tweet below that, you  
11 write: "The only way to support innovation is by  
12 ignoring shitcoins and focusing on Bitcoin."  
13 Right?

14 A Mm-hmm. Yes.

15 Q That was your view at the time you  
16 wrote this tweet, right?

17 A Yes.

18 Q Is it your testimony that you've  
19 softened this view since?

20 A Well, I would say in terms of  
21 innovations, the -- I'd make one exception to  
22 stable coins, Tether in particular. That was one



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1 thing that I have changed my mind upon.

2 Q In what way have you changed your  
3 mind about Tether?

4 A So I used to think there are no  
5 innovations anywhere outside of Bitcoin, and then  
6 I think Tether is the first example of an  
7 innovation in the space that is worthwhile that  
8 is outside of Bitcoin.

9 Q Other than changing that view of  
10 Tether, do you still stand by the opinions you  
11 expressed in Exhibit 189?

12 A Which ones exactly? There's a lot --  
13 there's two tweets with several sentences. Which  
14 one are you referring --

15 Q We'll start with the very beginning.  
16 "Cryptocurrencies are a zero-sum game, and if  
17 you're not Bitcoin, you've already lost."

18 Is that still your view today?

19 A No, I don't think they are a zero-sum  
20 game anymore.

21 Q And when did you change that view?

22 A I'm thinking around 2020, 2021,

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1 something like that. And I -- this is -- this  
2 isn't like a major milestone where one day I woke  
3 up and decided, all right, this is it.

4 But I would say that in 2020 was when  
5 I got introduced to several people who got into  
6 Bitcoin through other digital currencies, and I  
7 think that's helped me come to a more open-minded  
8 acceptance of the fact that these other digital  
9 currencies are doing Bitcoin a favor in a sense.

10 Q It is still today your hope that  
11 non-Bitcoin digital assets will be destroyed,  
12 right?

13 A I don't particularly care.

14 Q I'm going to show you another exhibit  
15 we'll mark as 190.

16 (Exhibit No. 190 was marked for  
17 identification.)

18 BY MR. OPPENHEIMER:

19 Q This is a tweet from your account  
20 from May 27th, 2022. The first one in the chain,  
21 you write: "There is nothing wrong with being  
22 happy to see shitcoins being -- getting

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1 destroyed. All shitcoins are inevitably going to  
2 zero. And the bigger they get, the more people  
3 will eventually be hurt when they do. The sooner  
4 they die, the better."

5 Is it your testimony that when you  
6 wrote "the sooner they die, the better," that  
7 wasn't particularly caring either way whether  
8 other cryptocurrencies get destroyed?

9 A Yeah.

10 Q You do think that it would be a good  
11 thing if XRP were destroyed soon, don't you?

12 A Mmm. I mean, I guess it depends on  
13 the context. So I presume this was -- the  
14 context here was people saying -- yeah, so now I  
15 remember this. This is May 2022. This was the  
16 context of the failure of LUNA, which is a --  
17 which is a coin that was -- it was a pretty high  
18 profile coin in early 2022. A lot of people made  
19 a lot of money on it very quickly. Everybody was  
20 saying this is the most innovative, this is the  
21 future, and then it fell apart.

22 And the context here is that a lot of

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1 Bitcoiners were cheering on its fall and a lot of  
2 people were saying, No, you can't cheer it on.  
3 That's not nice. We're all in this together.

4               So within that context, if a coin  
5 like that falls, I don't think it makes sense to  
6 be haranguing the people that are happy that it  
7 fell. I think the blame lies with the people who  
8 sold this catastrophe and ruined the lives of the  
9 investors in it.

10              And so with -- with things like these  
11 in that context, I don't think there's anything  
12 wrong with being happy to see them go. But I  
13 don't particularly care enough -- if you look at  
14 most of my work, whether it's my books or my  
15 podcasts, I'm not out there -- going out and  
16 telling people we must kill the shitcoins, we  
17 must stop killing the shitcoins.

18              In fact, in recent debates in the  
19 Bitcoin circle about implementing some changes to  
20 Bitcoin, one of my main disagreements with that  
21 proposal called Drivechain is the fact that the  
22 people marketing it are saying that this is

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1 what's going to kill the shitcoins.

2 And for me this is absolutely a red  
3 flag because you would not want to make any  
4 changes to Bitcoin in order to kill the  
5 shitcoins, because Bitcoin matters far too much  
6 to be tweaking it to care about shitcoins.

7 Q Your view is that it would be a good  
8 thing for shitcoins to get destroyed, right?

9 A Yeah, I wouldn't be crying over them.

10 Q And you include XRP in the set of  
11 shitcoins, right?

12 A Yes.

13 Q You've stated that you would like to  
14 see all non-Bitcoin digital assets die a gruesome  
15 death, haven't you?

16 A I probably have, yes.

17 Q And in fact, you stated that just a  
18 few months ago; isn't that right?

19 A I don't recall that.

20 Q All right. Let's mark Exhibit 191.

21 (Exhibit No. 191 was marked for  
22 identification.)

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1 THE WITNESS: Thank you.

2 BY MR. OPPENHEIMER:

3 Q Exhibit 191 has a tweet from you on  
4 June 13th, 2013 -- or I'm sorry, 2023.

5 A Yeah.

6 Q In that tweet you write: "If this  
7 pathetic concerned trolling and straw manning is  
8 representative of intelligent shitcoiners, then  
9 I'm increasingly optimistic about the entire  
10 shitcoin industrial complex dying the beautiful  
11 gruesome death it deserves sooner than anyone  
12 expected." Right?

13 A Yes.

14 Q Now, isn't it true that you've  
15 publicly accused Ripple of offering unregistered  
16 securities?

17 A I do not recall. It was not in any  
18 of my academic papers, and it was not in this  
19 report.

20 Q Right. But you did do it on Twitter,  
21 right?

22 A I don't recall. I've been on Twitter

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1 for a long time. I've tweeted a lot of tweets.

2 Q I'm aware. Let's go to what we'll  
3 mark as Exhibit 192.

4 (Exhibit No. 192 was marked for  
5 identification.)

6 BY MR. OPPENHEIMER:

7 Q Exhibit 192 is a Twitter thread from  
8 your account. The date is June 4th, 2022.

9 There is a news article first that  
10 says "Inside the Environmentalist's Campaign to  
11 Change Bitcoin's Code," and then you have a  
12 comment on that in your tweet.

13 Do you see that?

14 A Yes.

15 Q And what you say is: "Inside XRP's  
16 campaign to hire washed-up green prostitutes to  
17 cry harder in the hope of shifting crypto  
18 regulators' focus from illegal security offerings  
19 to green hysteria."

20 Do you see that?

21 A Yes.

22 Q What do you mean by "XRP's campaign"?

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1           A           Well, it's -- as I said earlier, I  
2   always get XRP and Ripple mixed up because I  
3   vaguely remember they were basically the same  
4   thing when they first came out. It used to be  
5   that people used to use Ripple to refer to the  
6   token as well. And so I'm -- I'm liable to using  
7   it -- using the two terms to refer to each other.

8           Q           So what you meant there was inside  
9   Ripple's campaign. Is that your testimony?

10          A           Probably, yes. Yeah.

11          Q           What did you mean by washed-up green  
12   prostitutes?

13          A           Greenpeace.

14          Q           So in your view, Ripple was hiring  
15   Greenpeace to try to shift regulators' focus; is  
16   that right?

17          A           I mean it's a tweet. I don't have  
18   compelling evidence. Nobody is -- I'm not really  
19   presenting this as a court case. But it's my  
20   impression of what was going on at that point is  
21   that, yeah, Greenpeace made money to try and  
22   focus on Bitcoin.



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1           Q           And you did believe that at the time  
2   you wrote it, right?

3           A           Yes.

4           Q           It's fair to say you're not open to  
5   changing your views on XRP, right?

6           A           Oh, no, I am open.

7           Q           Do you believe it's possible that the  
8   XRP Ledger could have a feature that is more  
9   important than the principal features you  
10  attribute to Bitcoin?

11                   MR. ELKHUNOVICH:  Objection.  Form.

12                   THE WITNESS:  I mean, that's a  
13  difficult question to answer.  Is it possible?  
14  Like if it has a feature like that, it doesn't.  
15  So now is it possible?  Well, I mean it depends on  
16  what you consider to be within the realm of  
17  possibility.

18   BY MR. OPPENHEIMER:

19           Q           Do you think another cryptocurrency  
20  could possibly add a feature that's more  
21  important than what you view as the -- the core  
22  features of Bitcoin?

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1 A No.

2 MR. OPPENHEIMER: Why don't we go off  
3 the record here for a bit.

4 THE VIDEOGRAPHER: We're off the  
5 record at 3:48 p.m.

6 (Recess.)

7 THE VIDEOGRAPHER: This is the  
8 beginning of media number 6. We're on the record  
9 at 3:59 p.m.

10 BY MR. OPPENHEIMER:

11 Q We've looked at a decent number of  
12 tweets from your account so far.

13 Do you also use Instagram?

14 A Yes.

15 Q And what is your Instagram user name?

16 A @Saifedean.

17 Q Approximately how much time per week,  
18 let's say on average, do you spend using or  
19 creating content to post on social media sites  
20 like Twitter and Instagram?

21 A Mmm. Well, I mean, the content  
22 creation part of it is not a very significant

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1 amount of time. I tweet when I get on -- when I  
2 have something to say, I tweet. So it doesn't  
3 take me a lot of time to tweet. I do spend a lot  
4 of time on Twitter because I consume Twitter, so  
5 I spend several hours every day reading Twitter,  
6 but I wouldn't say creating content.

7 Q Okay. Dr. Ammous, do you believe  
8 that most peer-reviewed economic publications and  
9 academic journals are a form of government  
10 propaganda?

11 A A very significant portion of them, I  
12 would say yes.

13 Q Let's look at what we'll mark as  
14 Exhibit 193.

15 (Exhibit No. 193 was marked for  
16 identification.)

17 BY MR. OPPENHEIMER:

18 Q Exhibit 193 is a copy of your  
19 Principles of Economics textbook that was  
20 published this year, correct?

21 A Yes.

22 Q I worry that my copy doesn't have

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1 page numbers, which might make this difficult,  
2 but -- oh, I see them. Okay.

3 I'll direct your attention to  
4 page 325.

5 In the second paragraph on page 325,  
6 you write, starting at the beginning of the  
7 paragraph: "The conveyor belt of mainstream  
8 economists in the highly rewarded, unreadable  
9 papers published over the past few decades  
10 contains an inordinate amount of government  
11 propaganda masquerading as economic analysis."

12 Do you see that?

13 A Yes.

14 Q Does that accurately describe your  
15 views about academic economists' publications?

16 A Yes.

17 Q Let's mark another exhibit. This  
18 will be 194.

19 (Exhibit No. 194 was marked for  
20 identification.)

21 BY MR. OPPENHEIMER:

22 Q Exhibit 194 is a copy of your book

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1 The Fiat Standard. What year was this book  
2 published?

3 A 2021.

4 Q I'll direct you to page 155 in this  
5 one.

6 A Okay.

7 Q On page 155, the first full  
8 paragraph, you write: "All along the content of  
9 the journals has continued to deteriorate to the  
10 point where it is predominantly unreadable  
11 academic masturbation with no link to the real  
12 world, which nonetheless adheres to the correct  
13 political, grammatical, and methodological  
14 guidelines needed to keep up the pretense that  
15 actual scholarship is taking place."

16 Do you see that?

17 A Yes.

18 Q Does that accurately reflect your  
19 views today?

20 A Yes.

21 Q And then later in that same  
22 paragraph, towards the very end: "Academic

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1 publication has been reduced to a circle jerk  
2 which only has consequences for the academic  
3 careers of those in the circle."

4 Does that also accurately represent  
5 your views today?

6 A Yes.

7 Q You can put that aside for now.

8 It's your view that universities are  
9 government propaganda machines, correct?

10 A Well, not exclusively.

11 Q "Over the course of the last several  
12 decades, universities have been transformed into  
13 propaganda machines bent on the indoctrination of  
14 young people."

15 Does that accurately reflect your  
16 view of universities?

17 A Yes.

18 Q Okay. Now, both of these last two  
19 books we looked at in Exhibits 193 and 194, The  
20 Fiat Standard and Principles of Economics were  
21 published by the Saif House, right?

22 A Yes.

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1 Q Did you ever submit either of these  
2 books to an independent publisher for review or  
3 publication?

4 A No.

5 Q Your first book, The Bitcoin  
6 Standard, was published by Wiley, right?

7 A Yes.

8 Q Did you ever submit your second book  
9 to Wiley for review?

10 A I didn't submit it, but they had  
11 offered me to publish it before I had finished  
12 it.

13 Q Why didn't you choose to submit that  
14 book to Wiley for publication?

15 A Because I've -- I decided that I  
16 wanted to self-publish for a variety of business  
17 and intellectual reasons.

18 Q Do you think Wiley would have  
19 demanded changes to some of the content if you  
20 had asked them to publish it?

21 A I don't think so. I mean, obviously  
22 they would have. It's an editor, that's their

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1 job is to make changes and suggest changes. But  
2 I don't think they would have been -- I think it  
3 would have been stylistic, linguistic. There may  
4 have been suggestions about things to introduce.

5 But I don't think they would have  
6 been -- I don't think it would have been a  
7 problem, because my first book, The Bitcoin  
8 Standard, I got highly constructive feedback from  
9 my editor. We didn't get into any conflict about  
10 you should remove this, we can't publish that,  
11 you have to get rid of this.

12 So I wouldn't expect to -- I did not  
13 expect to have been -- to have run into these  
14 kind of problems if I had published with Wiley.

15 Q And so why did you choose not to go  
16 with Wiley?

17 A It was primarily about owning my own  
18 intellectual property rights, and just I think  
19 the -- the business decision here is that I have  
20 a very -- I have a good readership, people who  
21 like my book, who are going to buy my book  
22 regardless of where I publish it from. And I



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1 thought it would make more sense for me to  
2 capitalize on this by integrating -- doing  
3 vertical integration of the supply chain from the  
4 writing of the book to the printing, to the  
5 distribution and fulfillment.

6 Q Do you know who Nassim Taleb is?

7 A Yes.

8 Q Who is he?

9 A He's a Lebanese author.

10 Q He wrote the original forward for  
11 your first book The Bitcoin Standard, right?

12 A Yes.

13 Q Do you know if Wiley, your publisher,  
14 made publication of The Bitcoin Standard  
15 conditional on Nassim Taleb writing the forward?

16 A No. I don't think it was  
17 conditional, but it was Nassim Taleb who gave  
18 them my book.

19 Q Do you know if Wiley requested that  
20 he write the forward to your book before  
21 publication?

22 A They didn't request it formally, but

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1 I believe they expected it, they thought it would  
2 happen.

3 Q And Mr. Taleb has subsequently  
4 withdrawn his forward, correct?

5 A No. He did not withdraw it. I  
6 removed it.

7 Q You removed it. And that was after  
8 he called you "dangerously crankish and  
9 conspiratorial," right?

10 A Yes.

11 Q Have you ever spoken to Mr. Taleb  
12 about those comments?

13 A No, I haven't spoken to him since.

14 Q And do you monitor the reception or  
15 reviews of the books that you've published?

16 A To some extent. Obviously I can't  
17 monitor it completely. There are thousands and  
18 thousands of reviews online.

19 Q So let's start with this one. We'll  
20 mark it as Exhibit 195.

21 (Exhibit No. 195 was marked for  
22 identification.)

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1 BY MR. OPPENHEIMER:

2 Q Exhibit 195 is a review of The Fiat  
3 Standard by Joakim Book published on the AIER. I  
4 believe that's American Institute for Economic  
5 Research website.

6 Are you familiar with this review?

7 A I've seen it before. Yes.

8 Q If you look at page 4 of this review,  
9 to give you an example, in the first full  
10 paragraph, he writes: "The book reads like a  
11 350-page undersourced rallying tweet full of  
12 insults, name calling, and hyperbolic language.  
13 While entertaining, it's tiresome -- and worth  
14 very little. Saif's aggressive tone and  
15 outlandish claims undercut his argument and  
16 bewilder the reader. He rarely provides  
17 references for his claims."

18 And then the next paragraph: "Anyone  
19 who endures the full length of the book deserves  
20 a medal."

21 Have you ever published any response  
22 to this review?

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1 A No.

2 Q Have you ever had any conversations  
3 with this reviewer about it?

4 A I -- not after it was published.  
5 I've spoken to him once before -- well, I've had  
6 an interaction with him on Twitter -- maybe a  
7 couple of interactions on Twitter, and I also met  
8 him in person once.

9 Q Did you discuss The Fiat Standard  
10 with him?

11 A No.

12 Q This review points out some factual  
13 errors that the reviewer claims are in The Fiat  
14 Standard. Have you done any work to verify  
15 whether those statements that he points out in  
16 here are errors in The Fiat Standard?

17 A I remember going through this review  
18 rather quickly, and I remember I said to myself  
19 that I was going to verify each one of these  
20 before I published the second edition of the  
21 book.

22 Q And have you done so at this point?

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1 A Not yet, no.

2 Q So for example, if you look at page 9  
3 of Exhibit 195, after the heading halfway down  
4 the page, he writes: "The book is also teeming  
5 with errors, and not just about the academic  
6 disciplines Saif sets out to denounce, but simple  
7 ones that are too numerous to" --

8 A I'm sorry, which page is that? You  
9 said 9?

10 Q Page 6.

11 A Six. Okay.

12 Q I'm sorry, I think I may have said  
13 page 9, but it's page 6.

14 A Okay.

15 Q Halfway down the page under the  
16 heading: "The book is also teeming with errors  
17 -- and not just about the academic disciplines  
18 Saif sets out to denounce, but simple ones that  
19 are too numerous to be random. The Bretton Woods  
20 conference is dated 1946, not 1944, and the  
21 Glass-Steagall Act to 1934, whereas the act with  
22 that name passed in 1932."

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1                   Have you verified whether those facts  
2   were errors in the book that you published?

3           A       No, I have not.

4           Q       What work did you do before  
5   publishing The Fiat Standard to fact-check it?

6           A       I read it, reread it.   Hired several  
7   editors to go over it and help me with it.

8                   I will -- now that you mention it, I  
9   remember that for my third book, Principles of  
10   Economics, I hired an editor, a mathematics  
11   editor, as I called her, specifically to just go  
12   through the book and go through all the numbers  
13   that were listed in the book and double-check  
14   them, double-check the math, double-check the  
15   sources, double-check that everything was  
16   correct.

17          Q       Okay.   I will show you a document now  
18   that we'll mark as Exhibit 196.   This will be a  
19   copy of your book The Bitcoin Standard.

20                   (Exhibit No. 196 was marked for  
21                   identification.)

22                   THE WITNESS:   Thank you.

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1 BY MR. OPPENHEIMER:

2 Q When was The Bitcoin Standard  
3 published?

4 A 2018.

5 Q And you recognize this as a copy of  
6 that book?

7 A Yes.

8 Q Now, in your report, Exhibit 174, in  
9 paragraph 5, you wrote that this book, The  
10 Bitcoin Standard, quote: Is widely hailed as the  
11 most important book on the economics of digital  
12 currencies.

13 Did you read reviews of The Bitcoin  
14 Standard before you wrote that sentence?

15 A Yes.

16 Q Are you aware that academic reviews  
17 of The Bitcoin Standard have been critical of it?

18 A I don't recall a critical academic  
19 review.

20 Q Let me mark for you Exhibit 197,  
21 which is a review of The Bitcoin Standard written  
22 by a professor named -- or a PhD economist named

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1 David Gerard.

2 (Exhibit No. 197 was marked for  
3 identification.)

4 THE WITNESS: I'm pretty sure David  
5 Gerard is not a PhD economist.

6 BY MR. OPPENHEIMER:

7 Q Well, I'm ready to discuss that with  
8 you. Let's mark Exhibit 198.

9 (Exhibit No. 198 was marked for  
10 identification.)

11 BY MR. OPPENHEIMER:

12 Q Exhibit 198 is a copy of David  
13 Gerard's profile from Lawrence University. He's  
14 listed as the John R. Kimberly Distinguished  
15 Professor in the American Economic System and  
16 professor of economics.

17 Do you see that?

18 A Yes.

19 Q Do you believe that this is a  
20 different David Gerard?

21 A Yes.

22 Q Which David Gerard do you believe



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1 wrote the review that we're discussing in  
2 Exhibit 197?

3 A He is -- he wrote a book -- I think  
4 he wrote this book called Attack of the 55 Foot  
5 Blockchain.

6 He looks different -- I knew him on  
7 Twitter. He's a lot more -- he's got a lot more  
8 body weight than this David Gerard; that's a lot  
9 less hair. This guy has hair. The guy who wrote  
10 this article doesn't have hair.

11 Q And do you know what the David Gerard  
12 you know from Twitter, do you know if he has any  
13 university affiliations?

14 A I don't know.

15 Q Okay. The David Gerard that you know  
16 on Twitter, you sent him a copy of your book for  
17 review before it was published, right?

18 A I think so. I'm not sure. It might  
19 have been after publication. I think so.

20 Q Well, I'll show you a Twitter thread  
21 that may refresh your recollection on this. This  
22 is going to be Exhibit 199.

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1 (Exhibit No. 199 was marked for  
2 identification.)

3 BY MR. OPPENHEIMER:

4 Q If you look down, the third tweet in  
5 this chain --

6 A Mm-hmm.

7 Q -- is from David Gerard, April 6th,  
8 2018. Do you see that?

9 A Yes.

10 Q Is that the David Gerard we've been  
11 discussing?

12 A Yes.

13 Q And what he writes there is: "Sure,  
14 e-mail a review copy." And you respond: "Sent.  
15 Check your DMs." Right?

16 A Yep.

17 Q Does that refresh your recollection  
18 that you sent him a review copy?

19 A Yes.

20 Q And do you know at the time you did  
21 that whether this book had been published?

22 A This was April 6th, 2018, so this was

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1 around the exact same time that the book came  
2 out. The book's official publication date was  
3 April 24, I believe, and it came out a few  
4 days -- a few weeks earlier.

5 Q But this is before the official  
6 publication date, right?

7 A Yeah.

8 Q Okay. A little farther down on  
9 Exhibit 199, there's also a Frances Cassandra  
10 Coppola who says: "Could you send me a review  
11 copy too, please?" And you say: "Done."

12 Do you see that?

13 A Yes.

14 Q Did you also send a review copy to  
15 Ms. Coppola?

16 A Yes.

17 Q After you sent the review copy to  
18 Mr. Gerard, did you read it after he published  
19 it?

20 A Did I read what?

21 Q Did you read his review after he  
22 published it?

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1 A Yes.

2 Q And have you ever published any  
3 response to his review?

4 A No.

5 Q Let me show you what we'll mark as  
6 Exhibit -- I believe we're on 200 -- 200.

7 (Exhibit No. 200 was marked for  
8 identification.)

9 BY MR. OPPENHEIMER:

10 Q Exhibit 200 is a review of The  
11 Bitcoin Standard written by Frances Coppola on  
12 April 11th, 2018.

13 Have you read this before?

14 A Yes.

15 Q It's fair to say that Ms. Coppola's  
16 review of The Bitcoin Standard is a critical one,  
17 right?

18 A Yes.

19 Q And it's also fair to say that  
20 Mr. Gerard's review in Exhibit 197 is also  
21 critical, right?

22 A Yes.

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1 Q And you're aware that there have been  
2 other critical reviews as well, correct?

3 A Yes.

4 Q Dr. Ammous, you believe that  
5 mainstream economists are part of a fiat cartel;  
6 isn't that right?

7 A Yes, I've used the term.

8 Q What do you mean by "fiat cartel"?

9 A Well, a cartel in economics is a term  
10 that refers to a conglomerate or a grouping of  
11 producers who maintain a monopoly on a particular  
12 good and prevent competitors from getting into  
13 that good. And I think this is an accurate way  
14 of describing the global financial system that  
15 rests around a monopoly of money.

16 Q You believe that fiat currencies  
17 around the world are controlled by a small cabal  
18 of politicians and bankers, right?

19 A I think it's -- the controls -- these  
20 currencies are controlled by the governments and  
21 the central banks.

22 Q And specifically, by a small cabal of

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1 politicians and bankers, right?

2 A I mean I think that's charged  
3 terminology. It might -- I may have used it as a  
4 kind of rhetorical flourish, but ultimately,  
5 yeah, it is a cabal and that it is -- it's a  
6 cartel, I mean in that they restrict the entry  
7 into the market.

8 Q And you don't dispute that you have  
9 in fact used that exact term "small cabal of  
10 politicians and bankers" before, correct?

11 A I don't have exact recollection, but  
12 I probably have used it, yes.

13 Q And you also think that universities  
14 are part of the same fiat conspiracy, right?

15 A I wouldn't call it a conspiracy,  
16 because conspiracy is something that is hidden.  
17 This is out in the open: Universities receive  
18 their funding from governments.

19 Q So universities are part of the same  
20 fiat cartel; is that right?

21 A Yes.

22 Q What, if anything, did you do to

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1 determine that this fiat cartel exists?

2 A Well, I wrote a whole book on this.

3 Q You're referring to The Fiat  
4 Standard?

5 A Yes.

6 Q And that book relies on your Austrian  
7 economics background, right?

8 A Yes.

9 Q And that's what led you to your  
10 conclusions about the existence of the fiat  
11 cartel?

12 A Yes.

13 Q You also think that the fiat cartel  
14 is responsible for advocating green energy,  
15 right?

16 A Well, I wouldn't say responsible for  
17 it entirely, because other parties, other people  
18 are part of this, but it does support it, yes.

19 Q So the fiat cartel supports  
20 advocating green energy.

21 A It supports green energy financially.

22 Q And in fact, you believe they use it

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1 as a way to destroy grids, impoverish countries,  
2 and get them ensnared into debt slavery forever.  
3 Right?

4 A I -- I've been growing into that  
5 conviction recently that it's -- it's a good way  
6 to keep countries in debt.

7 Q And that's your belief as you sit  
8 here today, right?

9 A I mean, I think there's -- there's an  
10 element of truth to it, definitely.

11 Q You also believe that concerns about  
12 climate change are lies that are being pedaled by  
13 scammers, right?

14 A I'm not sure if I've used this exact  
15 terminology, but generally, yes.

16 Q Well, let me show you the tweet where  
17 you used that exact terminology. This is going  
18 to be Exhibit 201.

19 (Exhibit No. 201 was marked for  
20 identification.)

21 BY MR. OPPENHEIMER:

22 Q This is a tweet from your account



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1     dated March 24th, 2023, right?

2             A           Yes.

3             Q           And what you write here is: "If you  
4     consume any magazine, TV channel, newspaper or  
5     university that tells you we are in a," quote,  
6     "climate crisis," quote, "you are willingly  
7     choosing to be scammed by corrupt liars who  
8     profit from your fear. Have fun staying scared."  
9     Right?

10            A           Yes.

11            Q           Let's also mark Exhibit 202.  
12                        (Exhibit No. 202 was marked for  
13                        identification.)

14     BY MR. OPPENHEIMER:

15            Q           Exhibit 202 is a Twitter postdated  
16     June 19th, 2023. Here you write: "Wind and  
17     solar electricity scams are a very efficient --  
18     efficient and effective way for the World Bank  
19     and the fiat cartel criminals to destroy grids,  
20     impoverish countries, and get them ensnared into  
21     debt slavery forever." Right?

22            A           Yes.

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1 Q And that's still your view as of  
2 today, right?

3 A Yes.

4 Q You haven't softened on that view?

5 A No.

6 Q Let's -- well, you're aware that some  
7 people have raised environmental concerns about  
8 Bitcoin due to the amount of energy that its  
9 proof of work protocol requires, right?

10 A Yes.

11 Q And it's fair to say that your view  
12 is anyone raising such concerns is just a  
13 scammer?

14 A No.

15 Q Fair to say your view is that climate  
16 change doesn't pose any real threat?

17 A No.

18 Q All right. Let's mark Exhibit 203.  
19 (Exhibit No. 203 was marked for  
20 identification.)

21 BY MR. OPPENHEIMER:

22 Q Exhibit 203 is a Twitter thread.

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1 It's got a post from your account on  
2 September 25th, 2023, 2:33 a.m. It's the second  
3 one down on the page.

4 Do you see that?

5 A Mm-hmm. Yes.

6 Q And what you write in the first  
7 sentence is: "There is no threat from climate  
8 change." Right?

9 A Yes.

10 Q Is it fair to say that your view is  
11 that climate change doesn't pose any real threat?

12 A Well, I would say -- I think I  
13 misphrased it here, because I think the climate  
14 is always obviously a threat. So, you know, when  
15 you're tweeting you just tweet off the cuff.  
16 But, no, realistically I think the climate is a  
17 threat. It can get too cold, people die. It  
18 can -- you can get a snowstorm, people die.

19 So climate and climate changing is,  
20 of course, a threat, but I don't think it is a  
21 threat in the exaggerated sense in which our  
22 emissions -- anthropogenic emissions are going to

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1 create irreversible catastrophic impact on earth.

2 Q Would you also say that you  
3 misphrased it when you wrote: "It's all a stupid  
4 scam with absolutely no basis in fact"?

5 A The idea that our emissions are going  
6 to cause catastrophe and disaster for human  
7 beings is the part that I would call.

8 Q So your view is that the idea that  
9 human emissions are going to cause catastrophe  
10 and disaster for human beings, that's a stupid  
11 scam with absolutely no basis in fact?

12 A Yes.

13 Q Okay. Now, you also believe that  
14 public health responses to the COVID-19 pandemic  
15 were also driven by the fiat cartel, right?

16 A I probably said something along those  
17 lines. I don't remember the exact phrasing.

18 Q That is an accurate statement of your  
19 belief, isn't it?

20 A Yes.

21 Q You've called the World Health  
22 Organization criminals, right?

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1 A Yes.

2 Q And you've called for them to be put  
3 to death, haven't you?

4 A I don't recall that.

5 Q Let's introduce Exhibit 204.

6 (Exhibit No. 204 was marked for  
7 identification.)

8 BY MR. OPPENHEIMER:

9 Q Exhibit 204 is a thread of tweets  
10 from your account dated October 11th, 2020. And  
11 if you look at the last full one on the first  
12 page of Exhibit 204, it's 11:55 a.m.

13 Do you see that one?

14 A Yes.

15 Q What you wrote there is: "Unless we  
16 get a pandemic crimes tribunal where these  
17 criminals hang, then it's clear that this  
18 criminal organization exists above the law able  
19 to enforce anything on anyone in the world,  
20 protected from facing any consequences for its  
21 actions."

22 With that reference to a tribunal

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1 where these criminals hang, were you calling for  
2 the hanging of World Health Organization members?

3 A No.

4 Q Were you saying that if they did not  
5 receive the death penalty, then that would mean  
6 that they don't face any consequences for their  
7 actions?

8 A I'm sorry, what was the question?

9 Q Were you saying in that tweet that if  
10 members of the World Health Organization didn't  
11 receive the death penalty, then that would mean  
12 they weren't facing any consequences for their  
13 actions?

14 A No, they could face consequences  
15 other than the death penalty.

16 Q Okay. You also believe that the fiat  
17 cartel has corrupted the food that we eat, right?

18 A The what?

19 Q The food that we eat.

20 A Yes.

21 Q And you've said Bitcoin fixes this,  
22 right?

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1 A Yes.

2 Q How would Bitcoin fix the food people  
3 eat?

4 A Well, this is an extensive discussion  
5 in my book The Fiat Standard. I'm not sure I'm  
6 going to be able to give it a quick summary here,  
7 but I'll just -- the basic idea is that with  
8 inflationary money, the value -- the price of  
9 food is constantly going up, which is an  
10 enormously big political problem for governments  
11 and central banks because people watch their  
12 money decrease in value, they watch their food go  
13 up in price, and that makes them unhappy, and  
14 they don't want to vote for the people in power.

15 So the way around that as I explain  
16 in The Fiat Standard, I think in the 20th century  
17 across the world governments have done this is to  
18 promote cheaper foods as alternatives to the  
19 foods that people are used to. And so if you  
20 substitute away from the expensive foods that you  
21 can no longer afford by convincing yourself that  
22 you're better off eating the cheap industrial

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1 waste that you can afford, well, then inflation  
2 isn't much of a problem if you just convince  
3 yourself that the new food is as good as the old  
4 food.

5 And so I think governments have  
6 sought to replace the kind of food that people  
7 eat in order to understate the effect of  
8 inflation.

9 Q You said that that's discussed in The  
10 Fiat Standard. Is that also an application of  
11 Austrian School economic theory?

12 A I mean, I think, yes, it's -- it's --  
13 it is an Austrian analysis.

14 Q Is it true that you've stated  
15 previously that the Impossible Burger causes  
16 infertility?

17 A I don't remember. Yeah, but it  
18 sounds like something I probably did say. I  
19 probably cited a study too that mentioned it.

20 MR. OPPENHEIMER: Let's take a quick  
21 break.

22 THE VIDEOGRAPHER: We're off the



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1 record at 4:36 p.m.

2 (Recess.)

3 THE VIDEOGRAPHER: We're back on the  
4 record at 4:49 p.m.

5 BY MR. OPPENHEIMER:

6 Q We discussed earlier the reviews of  
7 The Bitcoin Standard by David Gerard and Frances  
8 Coppola. You also had an exchange with them on  
9 Twitter about their reactions to your book,  
10 right?

11 A Yes.

12 Q Let's mark this as Exhibit 205.  
13 (Exhibit No. 205 was marked for  
14 identification.)

15 BY MR. OPPENHEIMER:

16 Q Is Exhibit 205 one of the Twitter  
17 exchanges that you had with these two  
18 individuals?

19 A Yes.

20 Q And after they offer some critical  
21 feedback, what you write in your tweet, third  
22 from the bottom on the first page, this is

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1 April 7th, 2018, 6:14 a.m., is: "Sorry to break  
2 it to you, but all the garbage you learned in  
3 university are not schools like the Austrians are  
4 schooled. The Austrian School of economics is  
5 sound economics. The brain damage you repeat is  
6 state propaganda manufactured by a child rapist."

7 Do you see that?

8 A Yes.

9 Q Is that still your view today that  
10 the economics learned in university is garbage,  
11 state propaganda manufactured by a child rapist?

12 A Well, some of it.

13 Q Mainstream economics at universities,  
14 correct?

15 A In particular, things related to  
16 macroeconomics.

17 Q And the field of macroeconomics  
18 includes topics like money supply, right?

19 A Amongst them, yeah.

20 Q Okay. I'm going to show you another  
21 Twitter thread. We'll mark this as Exhibit 206.

22 (Exhibit No. 206 was marked for

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1 identification.)

2 BY MR. OPPENHEIMER:

3 Q Exhibit 206 is a Twitter thread. The  
4 date on the top tweet from you is November 3rd,  
5 2023.

6 And this is commenting on a news  
7 article about the U.S. House of Representatives  
8 voting to give Israel funding with regard to the  
9 Gaza conflict.

10 Your response is: "Bitcoin fixes  
11 this."

12 You see that?

13 A Yes.

14 Q Is that an accurate statement of your  
15 view that Bitcoin fixes the Arab-Israeli conflict  
16 that's been going on for more than 75 years?

17 A No. It fixes -- in this particular  
18 instance, I'm referring to fixes the fact that  
19 the U.S. government can finance the conflict so  
20 easily, because it has a monetary printer that  
21 allows it to just give 14.6 billion -- \$14.3  
22 billion without having to have any American

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1 sacrifice a dime, at least not directly.

2 Q There would be indirect sacrifices,  
3 right?

4 A Yeah. This money creation results in  
5 price rises. So eventually it does devalue the  
6 wealth that people have, but it's still possible  
7 to do it in the short term without people feeling  
8 it.

9 Q Is there a difference in your view  
10 between printing money and borrowing money?

11 A There are differences, yes.

12 Q When the U.S. voted to send funding  
13 to Israel here, was that an exercise in printing  
14 money or borrowing money?

15 A Well, in this case, it's -- it  
16 involves both, because it's money given away by  
17 the Treasury, and so the Treasury finances its  
18 operation by selling bonds. But these bonds are  
19 usually purchased by -- or a large amount of  
20 these bonds are purchased by the Federal Reserve.

21 Q And your view that Bitcoin fixes  
22 this, that's based on the principles of Austrian

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1 School of economics, right?

2 A Well, I'd say this is -- yeah, it's  
3 not really economic theory per se. It's just  
4 understanding how financing government functions.

5 Q Is it your view that Israel used  
6 Jeffrey Epstein to blackmail world leaders into  
7 supporting it so that it could commit genocide?

8 A I think there's substantive --  
9 substantial evidence to suggest there is an  
10 element of blackmail involved in the Jeffrey  
11 Epstein operations.

12 Q I'll show you a -- a document that  
13 we're going to mark as Exhibit 207.

14 (Exhibit No. 207 was marked for  
15 identification.)

16 THE WITNESS: Thank you.

17 BY MR. OPPENHEIMER:

18 Q Exhibit 207 is a Twitter thread.  
19 You've got a post here on October 15th, 2023, at  
20 11:07 a.m.

21 And what you write here is: "If you  
22 care about Israelis, why don't you call on Israel

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1 to stop using pedophile pimps like Epstein to  
2 blackmail world leaders into supporting Israel so  
3 it keeps creating crimes, creating monsters  
4 desperate enough for revenge to be beyond all  
5 logical reproach."

6 Do you see that?

7 A Yes.

8 Q What investigation have you done to  
9 figure out that Israel is using pedophile pimps  
10 to blackmail world leaders?

11 A I cite a book called One Nation Under  
12 Blackmail by Whitney Webb.

13 Q Any other sources?

14 A No.

15 Q Okay. One last thing, if you  
16 turn back to your report, Exhibit 174, at  
17 paragraph 15.

18 A Yes.

19 Q This says: "I'm being compensated at  
20 a rate of \$500 per hour for my work on this  
21 case."

22 Do you see that?

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1 A Yes.

2 Q Is that 500 U.S. dollars per hour?

3 A Yes.

4 Q Why did you agree to get paid in  
5 dollars instead of Bitcoin?

6 A Because most people in today's world  
7 still use the dollar. And I -- I use the dollar  
8 in my -- most of my dealings with people.

9 MR. OPPENHEIMER: All right. No  
10 further questions at this time.

11 MR. ELKHUNOVICH: No questions here.

12 MR. OPPENHEIMER: Okay. Thank you,  
13 Dr. Ammous.

14 THE WITNESS: Great.

15 THE VIDEOGRAPHER: This concludes the  
16 videotaped proceeding of Saifedean Ammous. We're  
17 off the record at 4:57 p.m.

18 (A discussion was held off the  
19 record.)

20 MR. OPPENHEIMER: We discussed off the  
21 record, I think Ripple is going to designate this  
22 transcript "Confidential."

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1 Are the plaintiffs designating as well  
2 or just Ripple?

3 MR. ELKHUNOVICH: We have no objection  
4 to the above designation.

5 MR. OPPENHEIMER: Okay. Great. We  
6 can go off the record.

7 (Whereupon, the deposition of  
8 SAIFEDEAN AMMOUS, PhD was concluded  
9 at 4:58 p.m.)

10

11

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1 CERTIFICATE OF CERTIFIED SHORTHAND REPORTER

2 The undersigned Certified Shorthand Reporter  
does hereby certify:

3 That the foregoing proceeding was taken before  
me remotely via Zoom videoconferencing at the time  
4 therein set forth, at which time the witness was  
5 duly sworn; That the testimony of the witness and  
all objections made at the time of the examination  
6 were recorded stenographically by me and were  
thereafter transcribed, said transcript being a  
7 true and correct copy of my shorthand notes  
8 thereof; That the dismantling of the original  
9 transcript will void the reporter's certificate.

10 In witness thereof, I have subscribed my name  
11 this date: December 14, 2023.

12

13

14

15

16

17

A handwritten signature in cursive script that reads "Leslie A. Todd". Below the signature, the name "LESLIE A. TODD" is printed in a small, sans-serif, all-caps font.

18 (The foregoing certification of  
19 this transcript does not apply to any  
20 reproduction of the same by any means,  
21 unless under the direct control and/or  
22 supervision of the certifying reporter.)

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1 Saifedean Ammous, Ph.D., c/o  
SUSMAN GODFREY L.L.P.

2 1900 Avenue of the Stars, Suite 1400  
Los Angeles, California 90067-6029

3  
Case: In re Ripple Labs. Inc., Litigation

4 Date of deposition: December 13, 2023  
Deponent: Saifedean Ammous, Ph.D.

5

6 Please be advised that the transcript in the above  
referenced matter is now complete and ready for signature.

7 The deponent may come to this office to sign the transcript,  
8 a copy may be purchased for the witness to review and sign,  
9 or the deponent and/or counsel may waive the option of  
10 signing. Please advise us of the option selected.

11 Please forward the errata sheet and the original signed  
12 signature page to counsel noticing the deposition, noting the  
13 applicable time period allowed for such by the governing  
14 Rules of Procedure. If you have any questions, please do  
15 not hesitate to call our office at (202)-232-0646.

16

17

18 Sincerely,

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3  
4 SIGNATURE PAGE  
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5 Witness Name: Saifedean Ammous, Ph.D.  
Deposition Date: December 13, 2023

6  
I do hereby acknowledge that I have read  
7 and examined the foregoing pages  
of the transcript of my deposition and that:

8  
9 (Check appropriate box):  
( ) The same is a true, correct and  
10 complete transcription of the answers given by  
me to the questions therein recorded.  
11 ( ) Except for the changes noted in the  
attached Errata Sheet, the same is a true,  
12 correct and complete transcription of the  
13 answers given by me to the questions therein  
14 recorded.

15  
16 \_\_\_\_\_  
17 DATE WITNESS SIGNATURE  
18  
19  
20  
21 \_\_\_\_\_  
22 DATE NOTARY

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6 ERRATA SHEET  
7

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9 Witness Name: Saifedean Ammous, Ph.D.  
10 Deposition Date: December 13, 2023

11 Page No. Line No. Change  
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21 \_\_\_\_\_  
22 Signature Date

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